



2005 Catalog

Crown Amplifiers







TABLE OF CONTENTS

AMPLIFIERS

Installed Sound

CTs 2-Channel Series.....	4
CTs Multi-Channel Series.....	6
CH Series.....	8
CL Series.....	10
CP660.....	12
Crown Commercial Audio Series.....	14
House of Worship with CL.....	16
House of Worship with IQ and CTs.....	16
Multiple Zone Music with CL.....	17
House of Worship for Large Venues.....	17

Portable PA

Xs Series.....	20
CE Series.....	22
XLS Series.....	24
Musician or DJ with XLS.....	26
Musician or DJ with CE.....	26
Large Venue DJ with Xs.....	27
Regional Touring with Xs.....	27

Touring

I-Tech Series.....	30
Macro-Tech VZ Series.....	32
Macro-Tech 02 Series.....	34
Regional Tour with MA.....	36
Stage Monitors with I-Tech.....	36
Tour with I-Tech.....	37
Corporate A.V. with I-Tech.....	37

Recording/Broadcast

Studio Reference Series.....	40
K Series.....	42
D Series.....	44

Cinema

CTs 2-Channel Series.....	48
CTs Multi-Channel Series.....	48

CL Series.....	49
CE Series.....	49
XLS Series.....	49
DBC Network Bridge.....	50
Digital B-Chain with DBC Network Bridge.....	51
Small Passive with XLS.....	52
Medium Bi-Amplified with CL.....	52
Large Bi-Amplified with CTs.....	53
DBC System with CTs.....	53

IQ NETWORK

IQ Network.....	56
IQ Software.....	58
IQ Rackmount.....	60
IQ-PIPS.....	62
IQ Accessories.....	65

AMPLIFIER ACCESSORIES

PIP Modules.....	68
CTs Multi-Channel Accessories.....	69
SST Input Modules.....	70
CE Output Modules.....	71
Other Accessories.....	72
Module Compatibility Chart.....	73

REFERENCE

Amps Feature Comparison Chart.....	76
Amplifier Specifications.....	78
Warranties and Trademarks Notice.....	79





INSTALLED SOUND

CTs 2-Channel Series

CTs Multi-Channel Series

CH Series

CL Series

CP660

Crown Commercial Audio Series

AMPLIFIERS } INSTALLED SOUND

CTs Series: The New Standard

CTs 600, CTs 1200, CTs 2000, CTs 3000



Foundation

} FEATURES

- High power density. All two channel models in a 2U chassis.
- New Crown Switching Power Supply for lighter weight.
- Selectable "Constant-Voltage" or low-impedance operation per channel.
- 100V direct outputs on CTs 2000, CTs 3000.
- Fully PIP2-compatible.

POWER OUTPUT*

Models	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	16-ohm Dual (per channel)	70V Dual (per channel)	100V Dual (per channel)	4-ohm Bridge	8-ohm Bridge	16-ohm Bridge	140V Bridge	200V Bridge
CTs 600	150W**	300W	300W	300W	300W	—	300W**	600W	600W	—	—
CTs 1200	250W**	600W	600W	300W	600W	—	500W**	1,200W	1,200W	—	—
CTs 2000	1,000W	1,000W	1,000W	625W	1,000W	1,000W	2,000W	2,000W	2,000W	2,000W	2,000W
CTs 3000	1,500W	1,500W	1,250W	625W	1,500W	1,500W	3,000W	3,000W	2,500W	3,000W	3,000W

*Maximum average power in watts at rated THD, 20 Hz - 20 kHz.

** At 1 kHz.



} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.25 dB.

Signal-to-Noise Ratio, A-weighted, below rated power (20 Hz to 20 kHz): < 105 dB.

Total Harmonic Distortion (THD) at full rated power, from 20 Hz to 20 kHz
CTs 600 & CTs 1200: $< 0.1\%$.
CTs 2000 & CTs 3000: $< 0.35\%$.

Intermodulation Distortion (IMD) 60 Hz and 7 kHz at 4:1, from -40 dB to full power: $< 0.1\%$ for CTs 600/1200 and $< 0.35\%$ for CTs 2000/3000.

Damping Factor, 10 Hz to 100 Hz: > 3000 .

Crosstalk (below rated power, 20 Hz to 1 kHz): > 80 dB.

Voltage Gain (at maximum level setting)
8/4-ohm operation, 1.4V sensitivity
CTs 600: 35:1 (31 dB).
CTs 1200: 50:1 (34 dB).
CTs 2000: 63.9:1 (36 dB).
CTs 3000: 71.4:1 (37 dB).
26 dB: 20:1 (26 dB).

70V operation, 1.4V sensitivity (all models) and 100V operation, 2.0V sensitivity (CTs 2000 & CTs 3000): 50:1 (34 dB).

Common Mode Rejection (CMR) (20 Hz to 1 kHz, typical): 50 dB.

Maximum Input Level: +20 dBu before input compression, +32 dBu absolute maximum.

Power

Load Impedance (Safe with all types of loads), CTs 600 & CTs 1200: Stereo, 2 to 16 ohms and 70V; Mono, 4 to 16 ohms and 140V.

CTs 2000 & CTs 3000: Stereo, 2 to 16 ohms, 70V and 100V; Mono, 4 to 16 ohms, 140V and 200V.

AC Line Voltages Available (+15%, -25%): 120VAC, 60 Hz and 230VAC, 50 Hz.

Power Draw at Idle (120VAC mains).

CTs 600 & CTs 1200: 24W (standby mode).
CTs 2000 & CTs 3000: 35W (standby mode).

Controls and Indicators

Front Panel Indicators: Bridge Mode, Ready, Signal, Clip, Thermal, Fault, Data, Power.

Back Panel Controls and Connectors. Power Cord Connector: IEC

Reset Switch: Resets the power circuit breaker.

Channel Level Controls: 21-position detented, one per channel.

Level Attenuation: Approx. -95 dB to 0 dB gain.

High-Pass Filter: One three-position switch per channel selects between OFF, 35 Hz and 70 Hz 3rd-order filters.

Mode Switch: Two-position switch is used to select the amplifier's mode of operation: Dual or Bridge-Mono.

"Y" Input Switch: When set to ON, this switch parallels the input signals of the two channels, for use when the input signal is mono. Also can be used to daisy-chain the signal to another amplifier.

Input/Output

Input Connectors: Balanced 3-pin terminal block connectors, one per channel, on the standard PIP2™-BBY module.

Input Impedance: (nominally balanced, nominally unbalanced): 10 k ohms, 5 k ohms.

Output Connectors: One four-pole touch-proof terminal strip. Accepts up to 10 AWG terminal forks.

DC Output Offset (shorted input): < 2 millivolts.

Protection

CTs Series amplifiers provide extensive protection and diagnostic capabilities, including Thermal Level Control (TLC), fault, low-pass filters, high-pass filters, AC under/over voltage protection, DC output servo, circuit breaker, inrush limiting, and Junction Temperature Simulation (JTS) in CTs 600/1200.

Construction

Ventilation: Front-to-rear forced airflow. Two continuously variable speed fans direct the airflow through the amplifier for cooling.

Dimensions: EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 14.25-inch (36.2-cm) depth behind the mounting surface.

Weight

Net Weight,

CTs 600: 22.8 lbs. (10.3 kg);
CTs 1200: 23.4 lbs. (10.6 kg);
CTs 2000: 27.0 lbs. (12.2 kg);
CTs 3000: 27.7 lbs. (12.6 kg).

Shipping Weight,

CTs 600: 27.7 lbs. (12.6 kg);
CTs 1200: 28.3 lbs. (12.8 kg);
CTs 2000: 32.0 lbs. (14.5 kg);
CTs 3000: 32.7 lbs. (14.8 kg).

System Solutions

IQ® PIP™ LITE, IQ-PIP USP3,
IQ-PIP USP3/CN, PIP-3632,
PIP-4622, PIP-4632 and PIP-USL.



Accessories

T-170V: This is an autoformer that allows 100V output from the CTs 8200, and allows other amplifiers without direct constant voltage output to be easily integrated into distributed systems.

TP-170V: This is a rack-mountable panel with four autoformers as described above.

Regulatory Certifications



Other Applications



Note: Specifications apply to units in Dual mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

Crown's CTs Series amplifiers provide exceptional performance, flexibility and value for installed sound applications. CTs Series amplifiers feature independent selection of high and low impedance operation for a specific channel, plus power levels and features that were carefully chosen to match the requirements of fixed install design. Easy integration with HiQNet and CobraNet™ allows CTs amplifiers to deliver a comprehensive lineup of monitoring and control features along with digital audio transport for an award-winning digital audio solution.

INSTALLED SOUND

AMPLIFIERS } INSTALLED SOUND

CTs Multi-Channel Series: The New Standard

CTs 4200, CTs 8200



Flexibility

} FEATURES

- High power density: Four-channel model in a 2U chassis, eight-channel model in a 3U chassis.
- New Crown Switching Power Supply for lighter weight.
- Selectable "Constant-Voltage" or low-impedance (4/8 ohm) operation per channel-pair.
- 100V direct outputs.
- New "FIT" (Fault Isolation Topology) circuitry isolates fault conditions without affecting neighboring channels.
- Accept new MC accessory modules.

POWER OUTPUT*

Models	All channels driven			1 channel driven			All channel pairs driven			1 channel pair driven		
	4-ohm Dual	8-ohm Dual	70V Dual	4-ohm Dual	8-ohm Dual	70V Dual	8-ohm Bridge	16-ohm Bridge	100V Bridge	8-ohm Bridge	16-ohm Bridge	100V Bridge
CTs 4200	260W	200W	220W[†]	270W	220W	250W[†]	520W	400W	220W[†]	560W	440W	250W[†]
CTs 8200	200W	160W	200W[†]	270W	220W	250W[†]	400W	320W	200W[†]	540W	440W	250W[†]

*Maximum average power in watts at 1kHz at 0.1% THD.

†Constant Voltage full-bandwidth power ratings support 100 Hz to 20 kHz due to automatic high-pass filters.

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.5 dB.

Phase Response (at 1 watt): 10 Hz to 20 kHz: $\pm 35^\circ$.

Signal-to-Noise Ratio, unweighted, below rated power (20 Hz to 20 kHz): 100 dB.

Total Harmonic Distortion (THD) at full rated power, from 20 Hz to 20 kHz: $< 0.1\%$.

Intermodulation Distortion (IMD) 60 Hz and 7 kHz at 4:1, from 163 milliwatts to full bandwidth power: $< 0.05\%$ (typical).

Damping Factor, 10 Hz to 400 Hz: > 180 .

Crosstalk (below rated power, 20 Hz to 1 kHz): > 80 dB.

Voltage Gain (at maximum level setting) 1.4V sensitivity:

8/4-ohm operation: 20:1 (26 dB).

70V operation: 50:1 (34 dB).

100V operation: 71.4:1 (37 dB).

Common Mode Rejection (CMR) (20 Hz to 1 kHz, (typical): > 50 dB.

DC Output Offset (Shorted input): $< \pm 5$ mV.

Maximum Input Level before input compression: $+ 20$ dBu.

Power

Load Impedance: Safe with all types of loads.

Stereo: 4/8 and 25 ohms (70V).

Mono: 8/16 and 50 ohms (100V).

Required AC Mains: 120VAC, 60 Hz and 220/230/240VAC, 50 Hz.

Power Draw at Idle (120VAC mains, all channels in 4/8 ohm mode): 58W.

Controls and Indicators

Front Panel Indicators: Bridge Mode, Ready, Signal, Clip, Thermal, Fault, Data, Power.

Back Panel Controls and Connectors: Power Cord Connector: IEC.

Reset Switch: Resets the power circuit breaker.

Channel Level Controls: 21-position detented, one per channel.

Level Attenuation: Minus infinity (-70 dB) to 0 dB gain.

35-Hz High-Pass Filter: A fixed 35-Hz highpass filter per channel pair is automatically inserted when the mode switch is set to either of the constant-voltage settings. The high-pass filter corner frequency can be set to 70 Hz, or bypassed, with a service option.

Mode Switch: Used on each consecutive pair of channels, this four-position switch is used to select the amplifier's mode of operation: Dual 8/4 ohms, Dual 70V, Bridge-Mono 16/8 ohms, and Bridge-Mono 100V.

Input/Output

Input Connectors: Removable Phoenix™-style barrier connectors for balanced input.

Input Impedance (nominal): 20 k ohms balanced, 10 k ohms unbalanced.

Output Connectors: One four-pole touch-proof terminal strip for every two channels, with touch-proof cover. Accepts up to 10 AWG terminal forks.

Protection

CTs Multi-channel Series amplifiers provide extensive protection and diagnostic capabilities, including Thermal Level Control (TLC), fault, FIT protected circuitry, AC under/over voltage protection, power fuse, and inrush limiting.

Construction

Ventilation: Front-to-rear forced airflow.

Continuously variable speed fans (four in the CTs 8200, one in the CTs 4200) direct the airflow through the amplifier for cooling.

Dimensions

CTs 4200: EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 16.25-inch (41.3-cm) depth behind the mounting surface.

CTs 8200: EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 5.25-inch (13.3-cm) height and 16.25-inch (41.3-cm) depth behind the mounting surface.

Weight

Net Weight

CTs 4200: 27 lb 8 oz (12.5 kg);

CTs 8200: 36 lb 6 oz (16.5 kg).

Shipping Weight

CTs 4200: 32 lb (14.5 kg).

CTs 8200: 47 lbs. (21.3 kg).

System Solutions

IQ-MC4A: IQ module for CTs 4200A;

IQ-MC4: IQ module for CTs 4200;

IQ-MC8: IQ module for CTs 8200.



VCA-MC4A: VCA module for CTs 4200A;

VCA-MC4: VCA module for CTs 4200;

VCA-MC8: VCA module for CTs 8200.

IQ modules allow remote monitoring and control.

VCA modules allow remote volume control.

Accessories

Wall-mount level control panels for use with VCA module,

1-VCAP: 1-gang panel with 1 VCA channel volume control.

4-VCAP: 2-gang panel with 4 VCA channel volume controls.

T-170V: This is an autoformer that allows 100V output from the CTs 8200, and allows other amplifiers without direct constant voltage output to be easily integrated into distributed systems.

TP-170V: This is a rack-mountable panel with four autoformers as described above.

Regulatory Certifications



Other Applications



Crown's CTs Multi-channel Series offers wide flexibility for a wide range of installed sound applications. CTs Multi-channel Series amplifiers offer independent selection of high-and low-impedance operation for each channel pair, making these amps ideal for multi-zone installations. New Crown MC accessory modules provide enhanced control, monitoring, and system integration, including IQ System compatibility.

INSTALLED SOUND

AMPLIFIERS } INSTALLED SOUND

CH Series: 4/8 Ohm, 70V or 100V per channel

CH1, CH2, CH4



Versatility

} FEATURES

- Drives multiple impedances, with both low impedance and high impedance outputs per channel.
- High-pass filter for each channel provides low-frequency roll off to eliminate step down transformer saturation when used in 70V distributed systems.
- Rear panel detented level controls allow for accurate level settings and secure operation.
- “Contractor Correct” barrier strip output connectors allow for quick and easy connection, regardless of the load.

POWER OUTPUT*

Models	2-ohm Dual (per channel)	4-ohm Dual (per channel)	4-ohm Dual (per channel)	70/100V Dual (per channel)	8-ohm Bridge	140V Bridge	200V Bridge
CH1	—	450W	275W	300W	900W	600W	600W
CH2	—	660W	400W	600W	1,320W	1,200W	1,200W
CH4	1,400W	1,200W	600W	1,200W	2,400W	2,400W	—

*Maximum average power in watts at 0.5% THD, 1 kHz.

} SPECIFICATIONS

Power

Load Impedance: Safe with all types of loads.

CH1: 4 and 8 ohm Stereo; 16 ohm at 70V Stereo; 32 ohm at 100V Stereo; 8 and 16 ohm Bridge; 32 ohm at 140V Bridge; 64 ohm at 200V Bridge.

CH2: 4 and 8 ohm Stereo; 8 ohm at 70V Stereo; 16 ohm at 100V Stereo; 8 and 16 ohm Bridge; 16 ohm at 140V Bridge; 32 ohm at 200V Bridge.

CH4: 4 and 8 ohm Stereo; 4 ohm at 70V Stereo; 8 and 16 ohm Bridge; 8 ohm at 140V Bridge.

Voltage Gain, 1 kHz, 1.4V sensitivity,
CH1: 30.5 dB (4/8 ohm); 34 dB (70V); 37 dB (100V).
CH2: 32.1 dB (4/8 ohm); 34 dB (70V); 37 dB (100V).
CH4: 34 dB (4/8 ohm); 34 dB (70V).

AC Line Requirements: CL1, CL2: 60 Hz. CL4: 50/60 Hz.

AC Line Current (no signal):

CH1: 100 Volts: 7.6 A; 120 Volts: 6.3 A; 230-240 Volts: 3.5 A.

CH2: 100 Volts: 11.4 A; 120 Volts: 9.5 A; 230-240 Volts: 5.0 A.

CH4: 100 Volts: 8.5 A; 120 Volts: 7.1 A; 230-240 Volts: 3.7 A.

AC Line Connector: Detachable 15A IEC connector with country-specific plug.

Performance

Frequency Response, 20 Hz to 20 kHz at 1 watt:
CH1, CH2: ± 0.1 dB.
CH4: ± 0.25 dB.

Phase Response: ± 15 degrees from 20 Hz to 20 kHz at 1 watt.

Signal to Noise Ratio, A-Weighted,

CH1, CH2: Better than 105 dB below rated 1-kHz power.

CH4: Better than 102 dB below rated 1-kHz power.

Total Harmonic Distortion (THD) at rated power: 0.5% or less.

Intermodulation Distortion (60 Hz and 7 kHz at 4:1):
CH1, CH2: Less than 0.1% at rated power to 30 dB below rated power at 8 ohms.

CH4: Less than 0.5% at rated power to 30 dB below rated power at 8 ohms.

Damping Factor (8 ohm),

CH1, CH2: Better than 600 from 10 Hz to 400 Hz.

CH4: Better than 1000 from 10 Hz to 400 Hz.

Crosstalk, 20 Hz to 20 kHz:

CH1, CH2: Better than 50 dB below rated power.

CH4: Better than 50 dB below rated power at 10 kHz.

Common Mode Rejection (CMR): Better than 40 dB from 20 Hz to 1 kHz.

DC Output Offset (Shorted Input): ± 10 mV.

Controls

Level: A detented rotary level control for each channel located on the rear panel.

Power: An on/off rocker switch located on the front panel.

Mode: Two-position switch. "Stereo" operates the amplifier as two independent channels. "Bridge" bridges the two output channels for twice the output voltage.

Channel Operation Switch: Two-position switch: "4/8 Ohm" drives low-impedance speaker loads. "70V/100V" (70V only on the CH4) drives distributed high-impedance speaker loads; inserts 70-Hz high-pass filter to prevent step-down transformer saturation.

Indicators

Signal: A green indicator for each channel which flashes when a very low-level signal (> -40 dBm) is present at input. May be used for troubleshooting cable runs.

Clip: A red indicator for each channel which turns on when distortion becomes audible in the amplifier output.

Fault: A red indicator for each channel which indicates amplifier has muted output. Normally off. Status may be monitored remotely by plugging into back-panel RJ11 Fault jack.

Power: A blue indicator that turns on when the amplifier has been turned on and has power.

Input/Output

Input Connector (standard module): One Neutrik Combo connector for each channel (balanced 1/4-inch [6.35-mm] phone jack and 3-pin female XLR connector, in parallel with a barrier strip termination).

Input Stage: Electronically balanced with precision 1% resistors.

Input Impedance: Nominally 20 k ohms balanced. Nominally 10 k ohms unbalanced.

Input Sensitivity: Channel independent. Factory set at 1.4 volts for standard 1-kHz, 8-ohm power. 26-dB gain and 0.775-volt sensitivity available as a Service Option.

Output Connectors

CH1 and CH2: Four-terminal touch-proof barrier block, one per channel, connects to 8-ohm, 4-ohm, 70V or 100V outputs.

CH4: Four-terminal touch-proof barrier block.

Output Signal,

Stereo: Unbalanced, two-channel.

Bridge-Mono: Balanced, single-channel. Channel 1 controls are active; Channel 2 should be turned down.

Protection

Protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC, large or dangerous DC offsets and turn-on/turn-off transients.

Construction

Rugged steel chassis, coated with environmentally friendly powder for long life and ease of maintenance.

Cooling: Proportional speed fan.

Dimensions

Width (all models): EIA Standard 19-inch rack mount (EIA RS-310-B).

Height (all models): 5.25-inch (13.34-cm).

Depth (behind front mounting surface):

CH1, CH2: 12.25-inch (31.11-cm);

CH4: 16.25-inch (36.56-cm).

Weight

CH1: 40.6 pounds (18.4 kg);

CH2: 48.3 pounds (21.9 kg);

CH4: 33.3 pounds (15.1 kg).

For shipping weight, add 6 pounds (2.7 kg) to each amplifier's weight.

System Solutions

SST Modules: SST-SBSC: variable Linkwitz-Riley stereo crossover with mono-summed sub-bass outputs;

ScreenArray® SST modules.

Regulatory Certifications



Note: All measurements apply to all models of CH series amplifiers in stereo mode with 8-ohm loads and an input sensitivity of 26-dB gain, 1-kHz at rated power unless otherwise specified. Specifications for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

As part of the Contractor (CH/CL) Series, Crown delivers three models (CH1, CH2 and CH4) designed for both low and high impedance outputs per channel, with each channel independently capable of providing 4/8-ohm, 70V or 100V operation. The powerful and flexible CH Series amplifiers also include 70-Hz high pass filters on each channel, giving you the necessary low frequency rolloff to eliminate the saturation of constant voltage step-down transformers typically used in 70V and 100V distributed systems.

INSTALLED SOUND

AMPLIFIERS } INSTALLED SOUND

CL Series: High-Power, 2 Ohm Operation

CL1, CL2, CL4



Powerful

} FEATURES

- Low impedance compatibility for applications where high power, low impedance loads are the primary requirement.
- Rear panel detented level controls allow for accurate level settings and secure operation.
- “Contractor Correct” barrier strip output connectors allow for quick and easy connection, regardless of the load.
- Active crossover with signal routing available with optional System Solution Topology modules.
- Accurate, uncolored sound with very low distortion for the best in music and voice reproduction.

POWER OUTPUT*

Model	2-ohm Stereo (per channel)	4-ohm Stereo (per channel)	8-ohm Stereo (per channel)	4-ohm Bridge	8-ohm Bridge
CL1	560W	450W	275W	1,100W	900W
CL2	900W	750W	450W	1,950W	1,320W
CL4	1,400W**	1,200W	600W	2,800W**	2,400W

*Maximum average power in watts at 1kHz with 0.05% THD.

**+200V line voltage provides 1,800W (2 ohm stereo) and 3,600W (4 ohm bridge-mono).

} SPECIFICATIONS

Power

Load Impedance: Safe with all types of loads.
All models: 2, 4 and 8 ohm Stereo; 4, 8 and 16 ohm Bridge.

Voltage Gain, 1 kHz, 1.4V sensitivity,
CL1: 30.5 dB at 4/8 ohm.
CL2: 32.1 dB at 4/8 ohm.
CL4: 34 dB at 4/8 ohm.

AC Line Requirements: North American CL1 and CL2 units are 100 volts or 120 volts, 60 Hz only. All other models 230-240 volts are 50/60 Hz. Voltages are $\pm 10\%$.

AC Line Current (no signal),
CL1: 100 Volts: 7.6 A; 120 Volts: 6.3 A;
230-240 Volts: 3.5 A.

CL2: 100 Volts: 11.4 A; 120 Volts: 9.5 A;
230-240 Volts: 5.0 A.

CL4: 100 Volts: 8.5 A; 120 Volts: 7.1 A;
230-240 Volts: 3.7 A.

AC Line Connector: Detachable 15A IEC connector with country-specific plug.

Performance

Frequency Response, 22 Hz to 20 kHz at 1 watt,
CL1, CL2: ± 0.1 dB.
CL4: ± 0.25 dB.

Phase Response: ± 15 degrees from 10 Hz to 20 kHz at 1 watt.

Signal to Noise Ratio, A-Weighted:
CL1, CL2: Better than 105 dB below rated 1-kHz power.

CL4: Better than 102 dB below rated 1-kHz power.
Total Harmonic Distortion (THD), at rated power: 0.5% or less.

Intermodulation Distortion (60 Hz and 7 kHz at 4:1):
CL1, CL2: Less than 0.1% at rated power to 30 dB below rated power at 8 ohms.

CL4: Less than 0.5% at rated power to 30 dB below rated power at 8 ohms.

Damping Factor (8 ohm):
CL1, CL2: Better than 600 from 10 Hz to 400 Hz.
CL4: Better than 1000 from 10 Hz to 400 Hz.

Crosstalk, 20 Hz to 20 kHz:
CL1, CL2: Better than 50 dB below rated power.
CL4: Better than 50 dB below rated power at 10 kHz.

Common Mode Rejection (CMR): Better than 40 dB from 20 Hz to 1 kHz.

DC Output Offset (Shorted Input): ± 10 mV.

Controls

Level: A detented rotary level control for each channel located on the rear panel.

Power: An on/off rocker switch located on the front panel.

Mode: Two-position switch. "Stereo" operates the amplifier as two independent channels. "Bridge" bridges the two output channels for twice the output voltage.

Indicators

Signal: A green indicator for each channel which flashes when a very low-level signal (> -40 dBm) is present at input. May be used for troubleshooting cable runs.

Clip: A red indicator for each channel which turns on when distortion becomes audible in the amplifier output.

Fault: A red indicator for each channel which indicates amplifier has muted output. Normally off. Status may be monitored remotely by plugging into back-panel RJ11 Fault jack.

Power: A blue indicator that turns on when the amplifier has been turned on and has power.

Input/Output

Input Connector (standard module): One Neutrik Combo connector for each channel (balanced 1/4-inch [6.35-mm] phone jack and 3-pin female XLR connector, in parallel with a barrier strip termination).

Input Stage: Electronically balanced with precision 1% resistors.

Input Impedance: Nominally 20 k ohms balanced. Nominally 10 k ohms unbalanced.

Input Sensitivity: Channel independent. Factory set at 1.4 volts for standard 1-kHz, 8-ohm power. 26-dB gain and 0.775-volt sensitivity available as a Service Option.

Output Connectors: All models. Four-terminal touch-proof barrier block.

Output Signal,
Stereo: Unbalanced, two-channel.

Bridge-Mono: Balanced, single-channel. Channel 1 controls are active; Channel 2 should be turned down.

Protection

Protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC, large or dangerous DC offsets and turn-on/turn-off transients.

Construction

Rugged steel chassis, coated with environmentally friendly powder for long life and ease of maintenance.

Cooling: Proportional speed fan.

Dimensions

Width (all models): EIA Standard 19-inch rack mount (EIA RS-310-B);

Height (all models): 5.25-inch (13.34-cm);

Depth (behind front mounting surface):
CL1, CL2: 12.25-inch (31.11-cm);
CL4: 16.25-inch (36.56-cm).

Weight

CL1: 32.6 pounds (14.78 kg);
CL2: 40.3 pounds (18.28 kg);
CL4: 33.3 pounds (15.1 kg).

For shipping weight, add 6 pounds (2.7 kg) to each amplifier's weight.

System Solutions

SST Modules: SST-SBSC: variable Linkwitz-Riley stereo crossover with mono-summed sub-bass outputs;

ScreenArray SST modules.

Regulatory Certifications



Other Applications



Note: All measurements apply to all models of CH series amplifiers in stereo mode with 8-ohm loads and an input sensitivity of 26-dB gain, 1-kHz at rated power unless otherwise specified. Specifications for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

As part of the Contractor (CH/CL) Series, Crown provides three models (CL1, CL2 and CL4) that offer low-impedance compatibility for applications where high-power, low-impedance loads are the primary requirement. The CL Series models provide 2-, 4-, and 8-ohm options per channel. Rear-panel level controls for secure operation and precision detented level controls allow for accurate level settings in many fixed installation applications. Active crossover with signal routing available with optional System Solution Topology modules (SST-SBSC and ScreenArray SSTs).

INSTALLED SOUND

AMPLIFIERS } INSTALLED SOUND

CP Series: 6-Channel Flexibility

CP660



6 Channel

} FEATURES

- Six independent amplifier channels and three bridging switches provide maximum configuration flexibility.
- Separate gain controls on the back panel allow convenient level balancing of all channels.
- Super-quiet variable-speed fan with auto trigger provides silent, efficient cooling.
- Three Dual/Mono switches on the back panel give a broad range of flexibility in configuring your system.
- Compact architecture fits in a two-rack space.

POWER OUTPUT*

Model	1 Ch/1 load		Six-Channel Mode				Bridge Mode		6 Ch/3 loads
	4-ohm	8-ohm	4 Ch/4 loads	4-ohm	8-ohm	6 Ch/6 loads	2 Ch/1 load	4 Ch/2 loads	
						4-ohm 8-ohm	8-ohm	8-ohm	8-ohm
CP660	130W	90W	100W	70W	75W	60W	250W	200W	150W

*Maximum average power in watts at 0.3% THD, 1 kHz.



} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: +0/-1 dB.

Phase Response: ±15 degrees from 20 Hz to 10 kHz @ 1 watt.

Signal-to-Noise, A-weighted, below rated power: Better than 100 dB.

Total Harmonic Distortion (THD) at 1 kHz rated power: < 0.3% true THD.

Intermodulation Distortion (IMD): (60 Hz and 7 kHz @ 4:1) from rated power to 35 dB below rated power at 8 ohms: <0.25%.

Damping Factor: Greater than 250 from 20 to 400 Hz.

Input Sensitivity: 0.7 volt for rated output.

Input Impedance: 20 k ohms, balanced; 10 k ohms unbalanced.

DC Output Offset: Less than ±50 millivolts.

Load Impedance: Safe with all types of loads. Rated for 4 and 8 ohms in Dual mode, 8 ohms in Bridge mode

Required AC Mains: North American units are 120VAC, 60-Hz only; 100 and 240VAC (±10%) 50-Hz units are available.

AC Line Current (no signal):

100 Volts: 7.8 A

120 Volts: 6.5 A

240 Volts: 3.3 A.

Front Panel Controls

Power on/off rocker switch.

Back Panel Controls

Level control for each channel; three two-position Dual/Mono switches (Ch. 1&2, Ch. 3&4, Ch. 5&6). AC line connector, EMA 5-15P (15A) on North American units.

Front Panel Indicators

Green Signal LED for each channel; yellow Clip LED for each channel; red Temp LED; green Power LED.

Input Connectors

Balanced three-terminal barrier block connectors.

Output Connector

One set of 5-way, color-coded binding posts for each channel. The output connectors can accommodate banana plugs, double banana plugs, or wire as large as 10 gauge.

Protection

The CP660 amplifier is protected against shorted, open or mismatched loads; over-loaded power supplies; excessive temperature; chain destruction phenomena; input overload damage; and high-frequency blow-ups. It also protects loudspeakers from input/output DC, large or dangerous DC off-sets and turn-on/turn-off transients.

Cooling

Internal heat exchangers with on-demand forced air cooling.

Dimensions

EIA Standard 19-inch rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 12.75-inch (32.3-cm) depth behind front mounting surface. Center of gravity is 6 inches (15.2 cm) behind the front mounting surface and 7 inches (17.8 cm) in from the outer edge of the left rack ear.

Weight

Net Weight: 30 lbs. (13.0 kg).

Shipping Weight: 37 lbs. (17 kg).

Regulatory Certifications



Other Applications



Note: All measurements are related to 120VAC units 60 Hz in stereo mode with 8-ohm loads at 1-kHz at rated power unless otherwise specified. Specifications for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

The CP660 is a six-channel amplifier that will give you super flexibility and the best watts-to-dollar ratio around. With six independent channels, the CP660 takes the place of three, two-channel amplifiers, yet still fits in a standard two-rack-space chassis. It's ideal for a variety of surround-sound uses, as well as many paging, zoning, and background music applications. Plus, when you need it, you can easily bridge any pair of channels for double the power.

INSTALLED SOUND

AMPLIFIERS } INSTALLED SOUND

CCA Series: Crown's Commercial Audio Series

180MA, 280MA, 1160MA



Commercial Audio

} FEATURES

- 4 to 8 inputs, 1 to 2 amplifier output channels.
- Ideal for commercial and industrial use.
- Balanced Phoenix-type mic/line inputs; touch-proofed screw-terminal speaker outputs.
- Any input can be sent to any output.
- Built-in four-tone generator.
- Priority muting.

POWER OUTPUT*

Model	4-ohm	70V/100V
180MA	80W	80W
280MA	80W	80W
1160MA	160W	160W

*Minimum guaranteed power in watts at 1 kHz with 0.5% THD.



} SPECIFICATIONS

Performance

Frequency Response: 30 Hz to 15 kHz ± 1 dB at line out.

Power Bandwidth: 50 Hz to 20 kHz with $< 0.5\%$ THD at 2 dB below maximum 1 kHz power.

Signal to Noise Ratio: 85 dB, master volume at minimum.

DC Output Offset: $< \pm 5$ mV.

THD: Less than 0.5% at rated power at 1 kHz.

Input Sensitivity (for full output at maximum gain):

Balanced mic inputs: 3 mV.

Balanced line inputs: 800 mV.

RCA connectors: 400 mV.

Input Impedance:

Mic: 400 ohms

Line: 100 k ohms

RCA: 50 k ohms

Crosstalk: -70 dB at 1 kHz.

Line Output Level (nominal): 1V into 10 kilohms.

Phantom Power: 15 VDC.

AC Line Voltages Available: 100V 50/60 Hz; 120V 60 Hz; 220V 50/60 Hz; 230V 50/60 Hz; 240V 50/60 Hz.

Operating Temperature/Humidity: 0°C to 40°C at 95% relative humidity (non-condensing).

Storage Temperature: -20°C to 85°C .

Front Panel Controls and Indicators

Power Switch: Pushbutton on-off switch.

Input Volume Controls: Microphone/line, four in 180MA and 1160MA, eight in 280MA. Detented pots with knobs.

Tone Controls: Bass and Treble non-detented potentiometers on each input channel. Bass ± 10 dB at 100 Hz, Treble ± 10 dB at 10 kHz.

Power Indicator: Blue LED indicates power on.

Input Signal Presence Indicator: Green LED, one for each input channel, illuminates when input signal exceeds -24 dBu (line) or -70 dBu (mic).

Output Signal Presence Indicator: Green LED, one for each output channel, illuminates when output signal level exceeds 100 mV.

Clip Indicators: Red LED, one per output channel. Illuminates at threshold of audible distortion.

Output Volume Controls: One per output channel. Detented pot with knob.

Rear Panel Controls and Connectors

Reset Switch: Resets the circuit breaker that protects the power supply.

AC Power Inlet: Detachable IEC.

Auxiliary Power Input: 2-position terminal strip for 24 VDC ($\pm 10\%$) backup power. Accepts up to 14 AWG terminal forks.

Amplifier Outputs Connector: One per channel, 4-position terminal strip with Com, 4 ohms, 70V and 100V terminals. Accepts up to 14 AWG terminal forks. Non-touch cover included.

Output VCA Connector: 4-pin Phoenix-type connector for two VCA control lines of $+10$ VDC and ground. Compatible with Crown 1-VCAP and 4-VCAP modules.

Amp Config Switch: A DIP switch with two functions:

1. Assigns one of the inputs as the priority input for each output, thereby temporarily muting the remaining inputs. Muting is activated by contact closure.
2. Global enable switch for phantom power. Does not affect RCA inputs. Default position is off.

Priority Connector: 3-pin Phoenix-type connector allows Input 1 or Input 5 (280MA only) to mute other input signals by contact closure.

Input Routing Switch (280MA only): DIP switches that assign each input signal to each output. One switch per input.

Line Out Connector: One 3-pin balanced Phoenix-type connector per output channel. Post master, pre-VCA, with level control.

Tone Generator Connector: 5-pin Phoenix-type connector. Tones include Bell, Pre-Announce Chime, Alert Tone, and Evacuate Tone. All tones are activated by contact closures on the connector.

Input Routing Switch (280MA only): DIP switches that assign each input signal to each output. Two switches per input.

Line Out Connector: One 3-pin balanced Phoenix-type connector per output channel. Post master, pre-VCA. Level controlled by master volume control.

Tone Level: One per channel, a rear-panel potentiometer that sets the volume of the tones.

Input Connectors: Mic/Line Connector, 3-pin Phoenix-type, low-impedance balanced, one per input channel. Dual RCA for stereo music signals, unbalanced, summed together, two connectors per input channel. Amp Input Connector, 3-pin Phoenix-type, high-impedance balanced, one per amplifier channel. Used to link an additional mixer to the mixer-amplifier.

Mic/line Switch: Selects mic-level or line-level signals. One switch for each balanced input.

Link In/Out Switch: Slide switch, one per channel. With the Link Switch IN, any signal applied to the Amp Input connector will be mixed with the input signal(s). With the Link Switch OUT, only the signal from the Amp Input Connector will appear at the amplifier output.

Cooling: Convection cooled.

Protection: Current Limit Protection; Thermal Limit Protection (over-temperature thermal cutout); DC-Fault Load Protection.

Included Accessories: Power Cord. Detachable rack ears. Non-touch cover for output connectors.

Optional Accessories: 1-VCAP remote volume control for one channel. 4-VCAP remote volume control for four channels.

Dimensions: EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 14-inch (35.6-cm) depth behind the mounting surface.

Weight: Net Weight: 180MA: 21.0 lbs. (9.5 kg). 280MA: 25.3 lbs. (11.5 kg) 1160MA: 25.3 lbs. (11.5 kg). Shipping Weight: 180MA: 26.0 lbs. (11.8 kg) 280MA: 30.3 lbs. (13.7 kg) 1160MA: 30.3 lbs. (13.7 kg)

Regulatory Certifications*



Note: All measurements are related to 120VAC units 60 Hz in stereo mode with 8-ohm loads at 1-kHz at rated power unless otherwise specified. Specifications for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

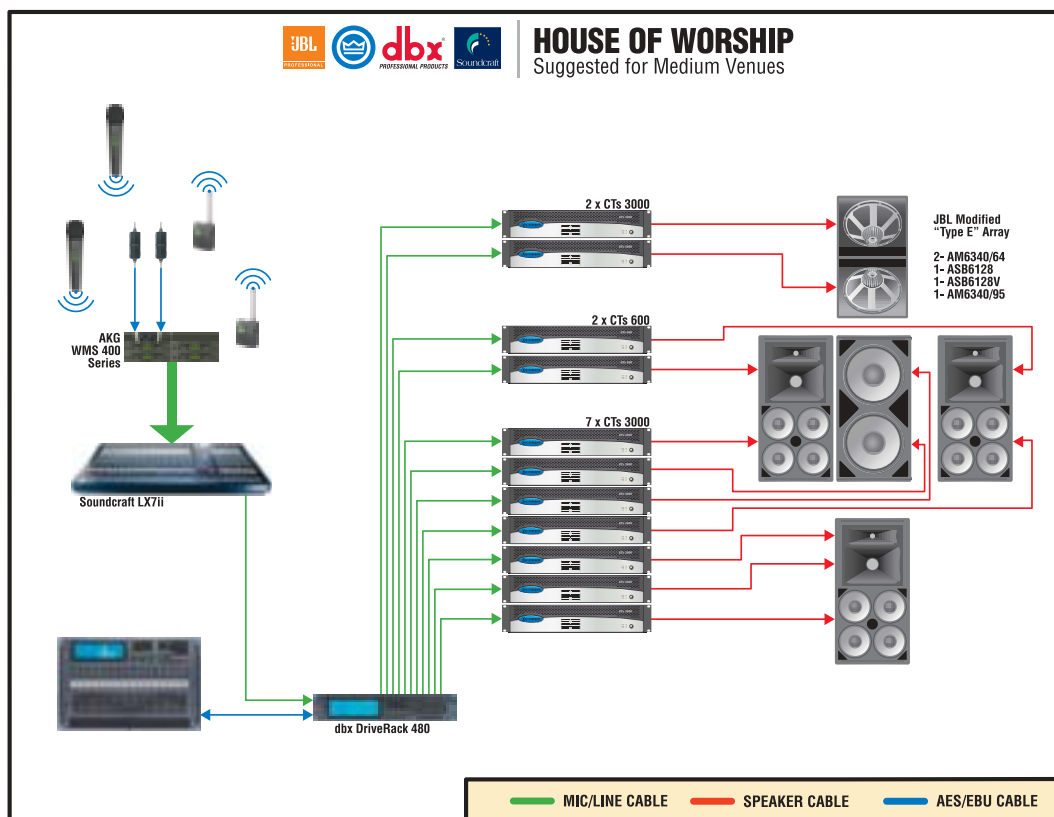
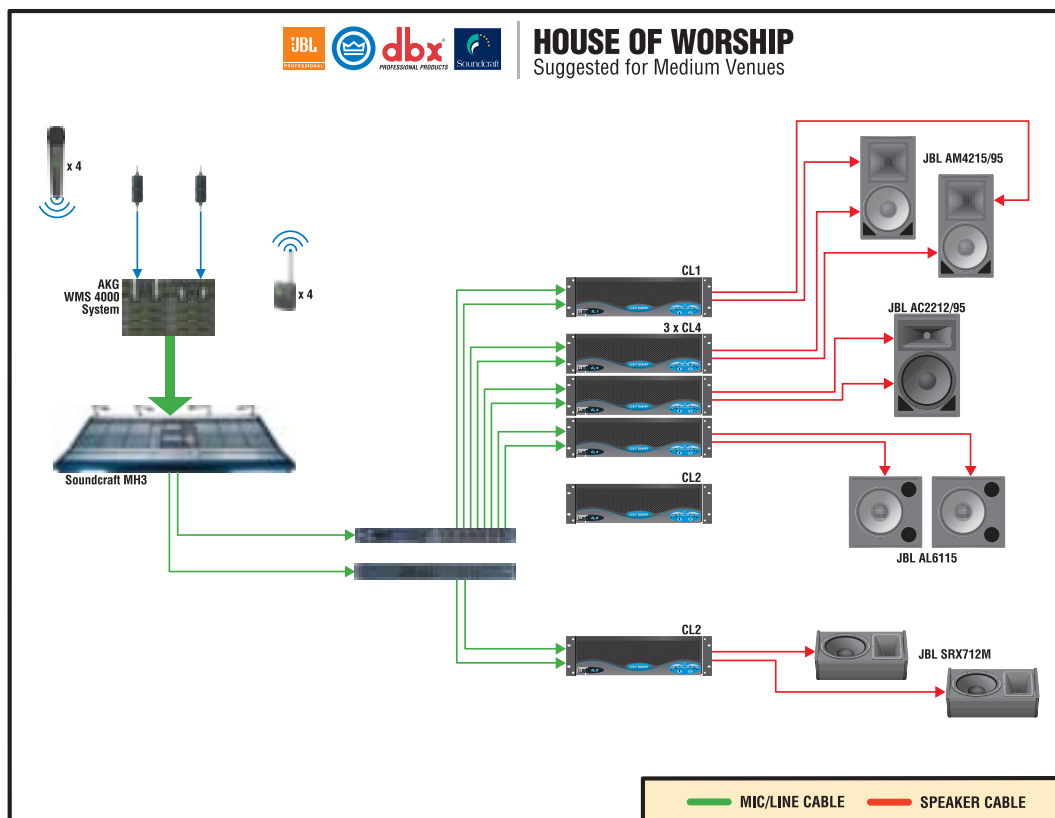
* Pending.

Crown's Commercial Audio mixer/amplifiers deliver legendary Crown quality to the commercial audio industry. These high-value mixer-amplifiers provide both 4-ohm and constant-voltage outputs (70V and 100V) for use in a wide range of commercial applications including schools, hospitals, factories, restaurant/retail, houses of worship, fitness facilities, A/V boardrooms, prisons, and small offices. Easily configured for a range of uses such as paging, background music, security, and evacuation instructions, Crown's Commercial Audio units are the smart choice for commercial sound.

INSTALLED SOUND

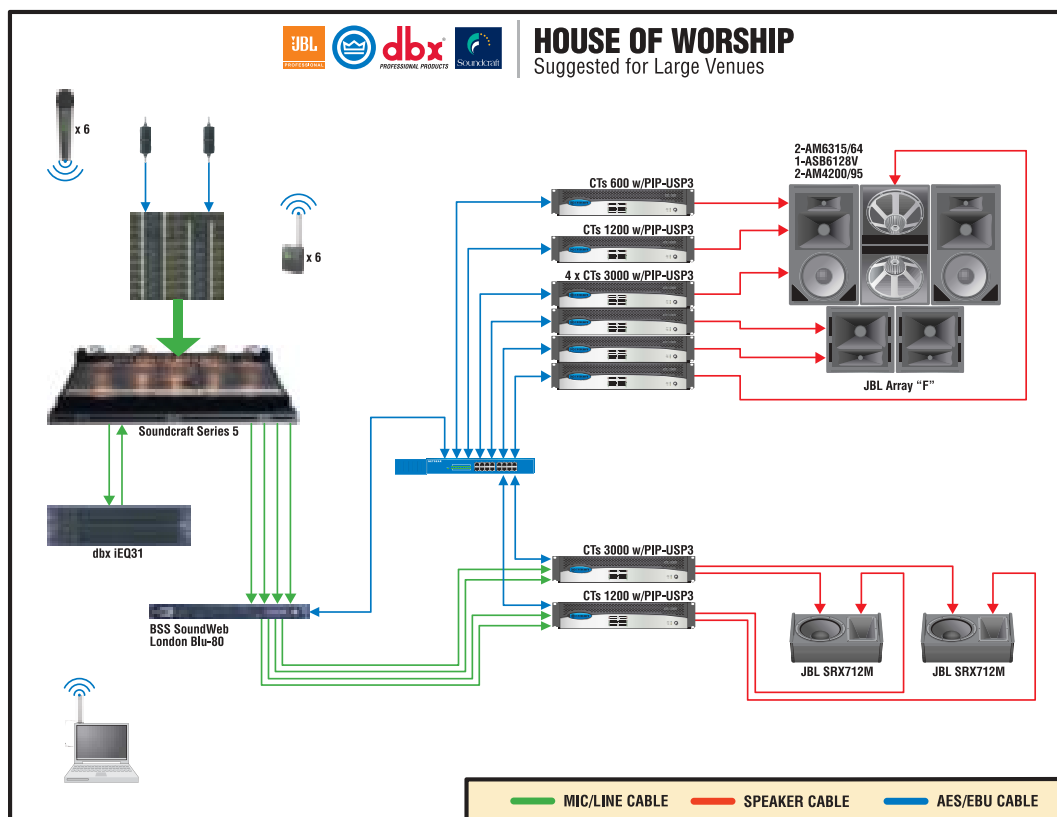
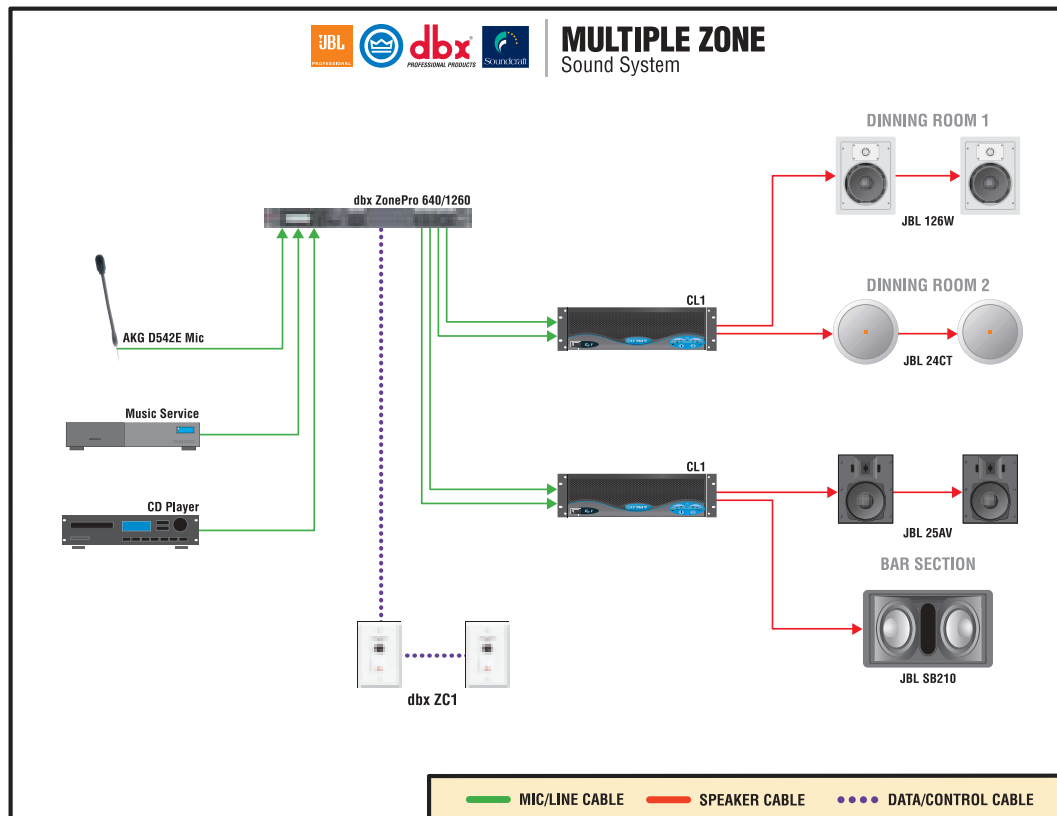
AMPLIFIERS } INSTALLED SOUND

Product Applications



AMPLIFIERS } INSTALLED SOUND

Product Applications







PORTABLE PA

Xs Series

CE Series

XLS Series

AMPLIFIERS } PORTABLE PA

Xs Series: Power in Xs

Xs500, Xs700, Xs900, Xs1200, Xs4300



Power in Xs

} FEATURES

- Housed in a rugged, all-steel 2U chassis.
- Efficient forced-air fan prevents excessive thermal buildup.
- 2-channel models have XLR-1/4-inch combo and Phoenix-style input connectors, daisy-chain XLR outputs, touch-proof binding post outputs and Speakon outputs.
- Precision detented level controls, power switch, and five LEDs which indicate clip for each channel, power, AC present, temperature and fault conditions.
- Microprocessor-controlled protection system.
- Lightweight design.

POWER OUTPUT*

Model	2-ohm Dual** (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm** Bridge	8-ohm Bridge
Xs500	750W	500W	400W	1,600W	1,450W
Xs700	900W	750W	450W	1,900W	1,645W
Xs900	1,100W	900W	600W	2,500W	2,100W
X1200	1,600W	1,100W	650W	3,000W	2,300W

*Refers to maximum average power in watts at 1kHz with 0.15% THD. **At 0.5% THD.

} SPECIFICATIONS

Performance

Sensitivity (volts RMS) for full rated power at 4 ohms: 1.4V.

Frequency Response (at 1 watt) 22 Hz to 22 kHz: ± 1 dB.

Phase Response (degrees at 1 watt, 20 Hz to 20 kHz): $+5^\circ$, -18°

Signal-to-Noise Ratio:

A-weighted, below rated power: > 102 dB.
22Hz to 22kHz, below rated power: > 97 dB.

Total Harmonic Distortion (THD) at full bandwidth power, from 20 Hz to 20 kHz: $< 0.5\%$.

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1 from full rated output to -40 dB): $< 1\%$.

Damping Factor (8 ohm) 10 Hz to 400 Hz: > 200 .

Crosstalk at 1 kHz (below rated power):

Xs500: > 55 dB
Xs700: > 55 dB
Xs900: > 67 dB
Xs1200: > 65 dB

Crosstalk at 20 kHz (below rated power):

Xs500: > 55 dB
Xs700: > 55 dB
Xs900: > 62 dB
Xs1200: > 45 dB

Voltage Gain (at maximum level setting):

Xs500: 32:1 (30.1 dB)
Xs700: 38:1 (31.6 dB)
Xs900: 42:1 (32.5 dB)
Xs1200: 47.4:1 (33.5 dB)

Input Impedance (balanced, unbalanced):
20 k ohms, 10 k ohms.

Load Impedance: Safe with all types of loads.
Rated for 2 to 8 ohms per channel in Stereo, 4 to 8 ohms in Bridge Mono.

DC Output Offset (shorted input): $< \pm 75$ millivolts.

AC Line Voltage and Frequency Configurations
Available ($\pm 10\%$): 120VAC/60 Hz and 230VAC/50 Hz.

Front Panel Controls

Level: Two or four front-panel, gray rotary level controls, one for each channel.

Power Switch: On when in the right-hand position.

Front Panel Indicators

Signal: Two or four green LEDs, one for each channel, illuminates when the channel's input signal level is above -40 dBu.

Clip: Two or four front-panel red LEDs, one for each channel, illuminates when the channel's output signal is being overdriven.

Power: Yellow LED indicates amplifier has been turned on and AC power is available.

AC Mains: Red LED indicates the presence of AC power at the power cord, even if the amplifier is not turned on.

Fault: Red LED illuminates when amplifier is in protect mode. Also illuminates briefly during normal power-up when amplifier is first switched on.

Bridge: Yellow LED indicates that amplifier is in Bridge-Mono mode

Temp: Red LED indicates that channel(s) are in thermal protect mode.

Input Connectors

XLR-1/4 inch combo connectors: One per channel, 3-pin female XLR connector and TRS-1/4 inch phone jack accept balanced or unbalanced signals.

3-pin Phoenix-style connectors (2-channel models only): One per channel, accepts balanced or unbalanced signals

Output Connectors

Balanced XLR connectors (2-channel models only): One per channel, 3-pin male XLR connector in parallel with XLR-1/4 inch combo and Phoenix-style input connectors for daisy-chain operation.

5-way binding post output connectors: One pair per channel; accept banana plugs, spade lugs or bare wire. Note: Binding post outputs on European models come with safety plugs installed to prevent European power-cord plugs from being inserted. The top & bottom entry positions for these connectors should therefore be used with European models.

4-pole Speakon output connector: One connector per channel. Accepts a 4-pole Speakon connector.

Protection

Xs Series amplifiers provide extensive protection and diagnostic capabilities, including output current limiting, microprocessor-controlled DC protection, circuit breaker, and special thermal protection for the unit's transformers.

Cooling

Flow-through ventilation from front to back. Internal heat sinks with forced-air cooling for rapid, uniform heat dissipation.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 17.14-inch (43.5-cm) depth behind the mounting surface.

Weight

Net Weight: 28 lb 14 oz (13.1 kg).

Shipping Weight: 34 lb (15.4 kg)

Regulatory Certifications



Other Applications



Note: Specifications apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

The Xs Series of power amplifiers from Crown represents a new era in affordable, quality switch-mode power amplification. The line consists of four models in a uniform, rugged 2U chassis, incorporating the best of tried-and-true design principles and innovative features. The series features four 2-channel models: the Xs500, Xs700, Xs900 and Xs1200. Each has identical features, except for output power. Xs Series amplifiers are professional stereo power amplifiers engineered to meet demanding audio requirements—reliably and within budget.

PORTABLE PA

AMPLIFIERS } PORTABLE PA

CE Series: Power and Reliability

CE 1000, CE 2000, CE 4000



2 Ohm Performance

} FEATURES

- Handles 2-ohm loads.
- Front-panel detented level controls.
- Function indicators, fan-assisted cooling, short-circuit protection.
- Class "I" (BCA) circuitry in CE 4000 offers extra power and efficiency.
- Selectable highpass and lowpass filters in CE 4000.
- Works with SST modules that provide extra functions.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge
CE 1000	560W	450W	275W	1,100W	900W
CE 2000	975W	660W	400W	1,950W	1,320W
CE 4000	1,400W**	1,200W	600W	2,800W**	2,400W

*Maximum average power in watts at 0.5% THD, 1 kHz.

**+200V line voltage provides 1,800W (2 ohm stereo) and 3,600W (4 ohm bridge-mono).

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt):

CE 1000/2000: ± 0.2 dB from 20 Hz to 25 kHz.
CE 4000: ± 0.25 dB from 20 Hz to 20 kHz.

Phase Response (at 1 watt) 20 Hz to 20 kHz:
 ± 15 degrees.

Signal to Noise Ratio (below rated power),
20 Hz to 20 kHz:
CE 1000/2000: > 100 dB.
CE 4000: > 102 dB.

Total Harmonic Distortion (THD) at rated power:
0.5% or less.

Intermodulation Distortion (IMD)
(60 Hz and 7 kHz at 4:1):

CE 1000/2000, from 163 milliwatts to full
bandwidth power: Less than 0.1%.

CE 4000, from rated power to -30 dB at 8 ohms:
Less than 0.5%.

Damping Factor from 10 Hz to 400 Hz:

CE 1000/2000: Greater than 400
CE 4000: Greater than 1000. (Measured using
binding post output connectors.)

Crosstalk, below rated power, 20 Hz to 20 kHz:
CE 1000/2000: > 55 dB.
CE 4000: > 40 dB.

Common Mode Rejection (CMR)
20 Hz to 1 kHz: > 70 dB.

DC Output Offset (Shorted Input): $< \pm 10$ mV.

Input Stage: Input is electronically balanced and
employs precision 1% resistors.

Input Impedance (balanced, unbalanced):
20 k ohms, 10 k ohms.

Input Sensitivity: 1.4 volts for standard 1-kHz
power, or fixed 26-dB gain. 0.775-volt sensitivity
also standard on CE4 000 amplifiers; 0.775-volt
sensitivity is available as a Service Option on CE
1000/2000 amplifiers.

Load Impedance: Safe with all types of loads.
Rated for 2, 4 and 8 ohms in Stereo mode, 4 and 8
ohms in Bridge-Mono mode.

Voltage Gain to 1-kHz, 8-ohm rated output:

CE 1000: 30.5 dB at 1.4-volt sensitivity;
26 dB at 2.34-volt sensitivity.

CE 2000: 32.1 dB at 1.4-volt sensitivity;
26 dB at 2.83-volt sensitivity.

CE 4000: 39.0 dB at 0.775-volt sensitivity; 33.8 dB
at 1.4-volt sensitivity; 26 dB at 3.46-volt sensitivity.

Required AC Mains: 50/60 Hz, 100-240 VAC
($\pm 10\%$).

AC Line Current (CE 4000):

100 volts: 8.5 A; 120 volts: 7.1 A;
230-240 volts: 3.7 A.

Power Draw At Idle:

CE1000/2000: 90 watts;
CE4000: 120 watts.

Front Panel Controls

Level: A detented rotary level control for each
channel.

Power: An on/off rocker switch.

Back Panel Controls

Stereo/Mono: Two-position switch selects either
Stereo or Bridge-Mono operation.

Filter Switches (CE 4000 only),

Low Pass: A three-position switch (Flat / 80 Hz /
100 Hz) for each channel. Filter rolloff is 24-dB per
octave.

High Pass: A four-position switch (Flat / 30 Hz / 40
Hz / 50 Hz) for each channel. Filter rolloff is 18-dB
per octave.

Internal Controls

Sensitivity

CE 1000/2000: Two-position switch: 1.4 volts for
full output into an 8-ohm load (default setting), or a
fixed voltage gain of 26 dB.

CE 4000: Three-position switch: 0.775 volts or 1.4
volts for full output into an 8-ohm load (default set-
ting), or a fixed voltage gain of 26 dB.

Front Panel Indicators

Signal: Green LED for each channel flashes when
a very low-level signal (> -40 dBm) is at input. May
be used to troubleshoot cable runs.

Clip: Red LED for each channel turns on when
distortion becomes audible in the amplifier output.

Fault: Red LED flashes to signal fault condition.
Will also flash during normal start-up sequence.

Power: Green LED turns on when amplifier is on
and has power.

Input Connectors (standard module)

One Neutrik® Combo connector for each channel
(balanced 1/4-inch [6.35-mm] phone jack and 3-
pin female XLR connector, in parallel with a barrier
strip termination).

Output Connectors

CE 1000/CE 2000: Choice of 2 Neutrik Speakon®
NL4MP (Models CE1000A or CE2000A), barrier
plus Speakon (CE1000AS1 or CE2000AS1), or 5-
way plus Speakon (CE1000AS2 or CE2000AS2);

CE 4000: 5-way plus Speakon.

Other Connectors

Fault Jack: RJ-11 jack allows remote monitoring
of amplifier Fault condition. An LED or other signal-
ing device (not supplied) may be used.

Protection

Protected against shorted, open or mismatched
loads; overloaded power supplies; excessive tem-
perature, chain destruction phenomena, input over-
load damage and high-frequency blowups. They
also protect loudspeakers from input/output DC,
large or dangerous DC offsets and turn-on/turn-off
transients.

Construction

Rugged steel chassis is coated with environmental-
ly friendly powder for long life and ease of mainte-
nance.

Cooling: Proportional speed fan.

Dimensions: EIA Standard 19-inch rack mount
width (EIA RS-310-B), 5.25-inch (13.34-cm) height
and 12.25-inch (31.11-cm) (CE 1000/2000) or
16.25-inch (36.56-cm) (CE 4000) depth behind
front mounting surface. CE4000 has additional 1-
inch rear rack ears.

Weight: CE 1000: 32.6 pounds (14.79 kg). CE
2000: 40.3 pounds (18.28 kg). CE 4000: 33.3
pounds (15.1 kg). For shipping weight, add 6
pounds (2.7 kg) to each amplifier's weight.

Accessories

CE handles: See Accessories Section for more
information.

System Solutions

SST modules: See CL models for description.

Regulatory Certifications



Other Applications



With their powerful, reliable performance, CE Series amps easily handle 2-ohm loads and are capable of chest-thumping lows. CE 4000 amplifiers feature Crown's patented, award-winning BCA® (Class "I") technology, and provide superior power output, increased efficiency, and legendary Crown sound. CE 4000 amplifiers feature selectable, on-board high- and low-pass filter sets, so you can easily add a sub-bass system. With all models, optional SST modules provide features like crossovers and summed bass output.

*Note: All measurements related to 120-volt, 60-Hz units in stereo mode with 8-ohm loads and an input sensitivity of 26-dB gain at 1-kHz rated power unless otherwise specified. Specifications for units supplied for units supplied outside the U.S.A. may vary slightly at different AC voltages and frequencies.

PORTABLE PA

AMPLIFIERS } PORTABLE PA

XLS Series: Affordable and Reliable

XLS 202, XLS 402, XLS 602



Evolution

} FEATURES

- Housed in a rugged, all-steel 2U chassis.
- Efficient forced-air fan prevents excessive thermal buildup.
- Electronically balanced XLR inputs; touchproof binding post and Speakon outputs.
- Precision detented level controls, power switch, and four LEDs, which indicate clip for each channel, power and fault conditions.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge
XLS 202	250W	200W	145W	400W	500W
XLS 402	570W	400W	260W	800W	1,140W
XLS 602	840W	600W	370W	1,200W	1,680W

* Maximum average power in watts at 0.5% THD, 1 kHz.

} SPECIFICATIONS

Performance

Sensitivity (volts RMS) for full rated power at 4 ohms,
XLS 202: 0.725
XLS 402: 1.025
XLS 602: 1.26.

Frequency Response (at 1 watt) 22 Hz to 20 kHz:
 ± 0.75 dB.

Phase Response (degrees at 1 watt)
at 10 Hz: -10 .
at 20 kHz: $+19$.

Signal-to-Noise Ratio (20 Hz to 20 kHz)
A-weighted, below rated power: > 100 dB.
No weighting, below rated power: > 95 dB.

Total Harmonic Distortion (THD) at full bandwidth power, from 20 Hz to 1 kHz: $< 0.5\%$.

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1) from full rated output to -40 dB:
 $< 0.3\%$.

Damping Factor (8 ohm) 10 Hz to 400 Hz: > 200 .

Crosstalk (below rated power)
at 1 kHz: -82 dB.
at 20 kHz: -58 dB.

DC Output Offset (shorted input): ± 10 millivolts.

Voltage Gain (at maximum output): 31 dB.

Input Impedance: (balanced, unbalanced):
20 k ohms, 10 k ohms.

Load Impedance: Safe with all types of loads.
Rated for 2 to 8 ohms in Stereo, 8 ohms in Bridge-Mono.

AC Line Voltages Available ($\pm 10\%$): 120VAC, 60 Hz and 230VAC, 50 Hz.

Front Panel Controls

Level: Two front-panel, black rotary level controls, one for each channel.

Power: Front-panel switch; on when in the UP position.

Back Panel Controls

Circuit Breaker: Provides overload protection.

Front Panel Indicators

Clip: Two front-panel red LEDs, one for each channel, illuminate when the channel's output signal is being overdriven.

Power: Green front-panel LED indicates amplifier has been turned on and AC power is available.

Fault: Yellow front-panel LED illuminates when amplifier is in protect mode. Also illuminates briefly during normal power-up when amplifier is first switched on.

Input Connectors

One per channel; back-panel three-pin female XLR input connectors.

Output Connectors

Two 4-pole Speakon connectors (one per channel) and one pair of back-panel, 5-way binding posts per channel; accepts banana plugs, spade lugs or bare wire. (European models do not accept banana plugs).

Protection

XLS Series amplifiers provide extensive protection including output current limiting, DC protection, circuit breaker, and special thermal protection for the unit's transformers.

Cooling

Flow-through ventilation from front to back. Internal heat sinks with forced-air cooling for rapid, uniform heat dissipation.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 14-inch (35.6-cm) depth behind the mounting surface.

Weight

Net Weight,
XLS 202: 21.0 lbs. (9.5 kg);
XLS 402: 25.3 lbs. (11.5 kg);
XLS 602: 27.2 lbs. (12.3 kg).

Shipping Weight,
XLS 202: 26.0 lbs. (11.8 kg);
XLS 402: 30.3 lbs. (13.8 kg);
XLS 602: 32.2 lbs. (14.6 kg).

Regulatory Certifications



Other Applications

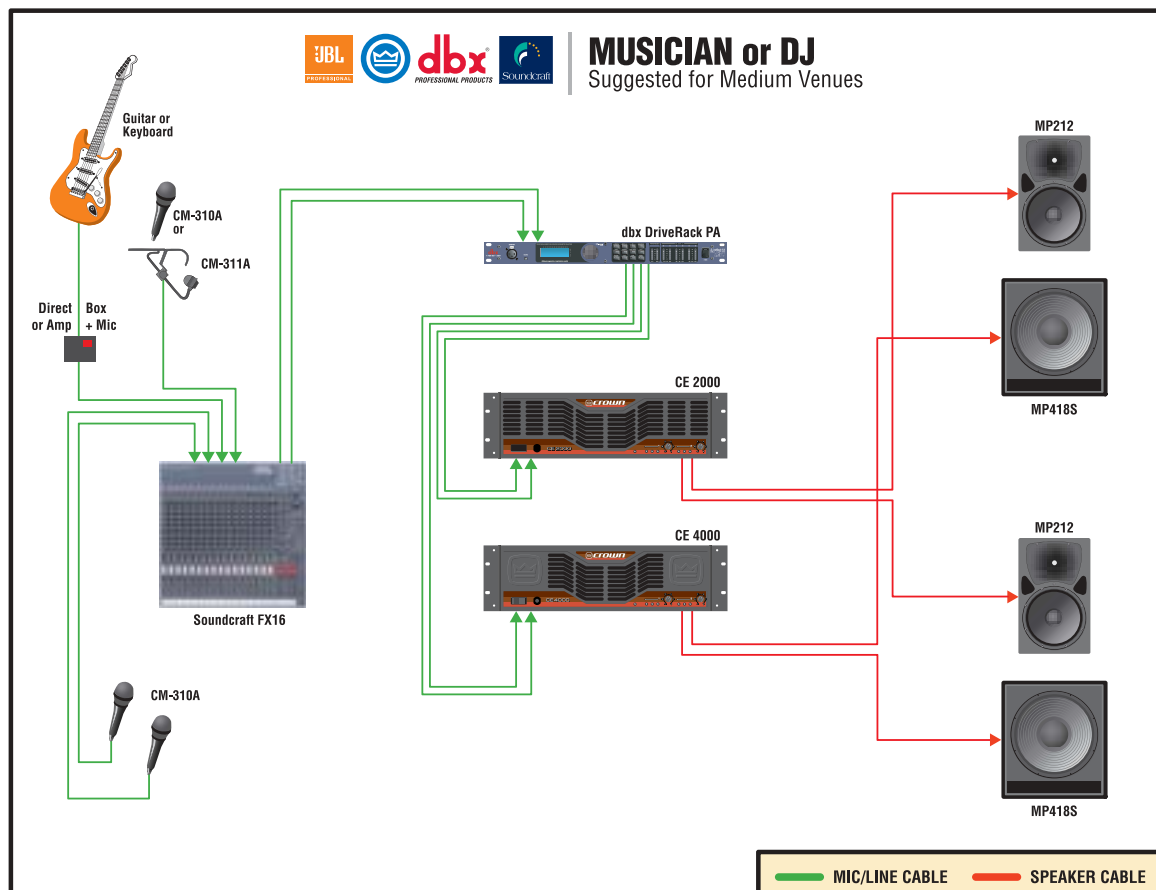
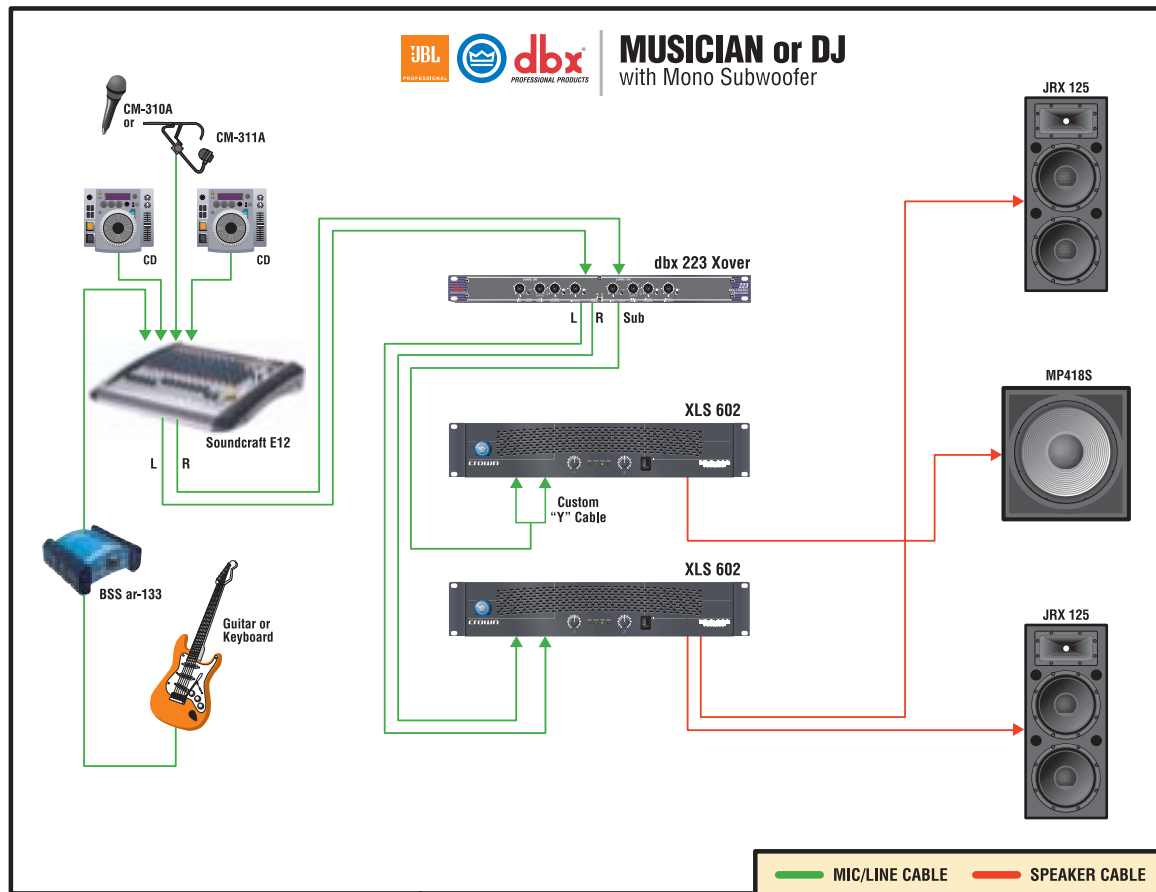


Note: Specifications apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

PORTABLE PA

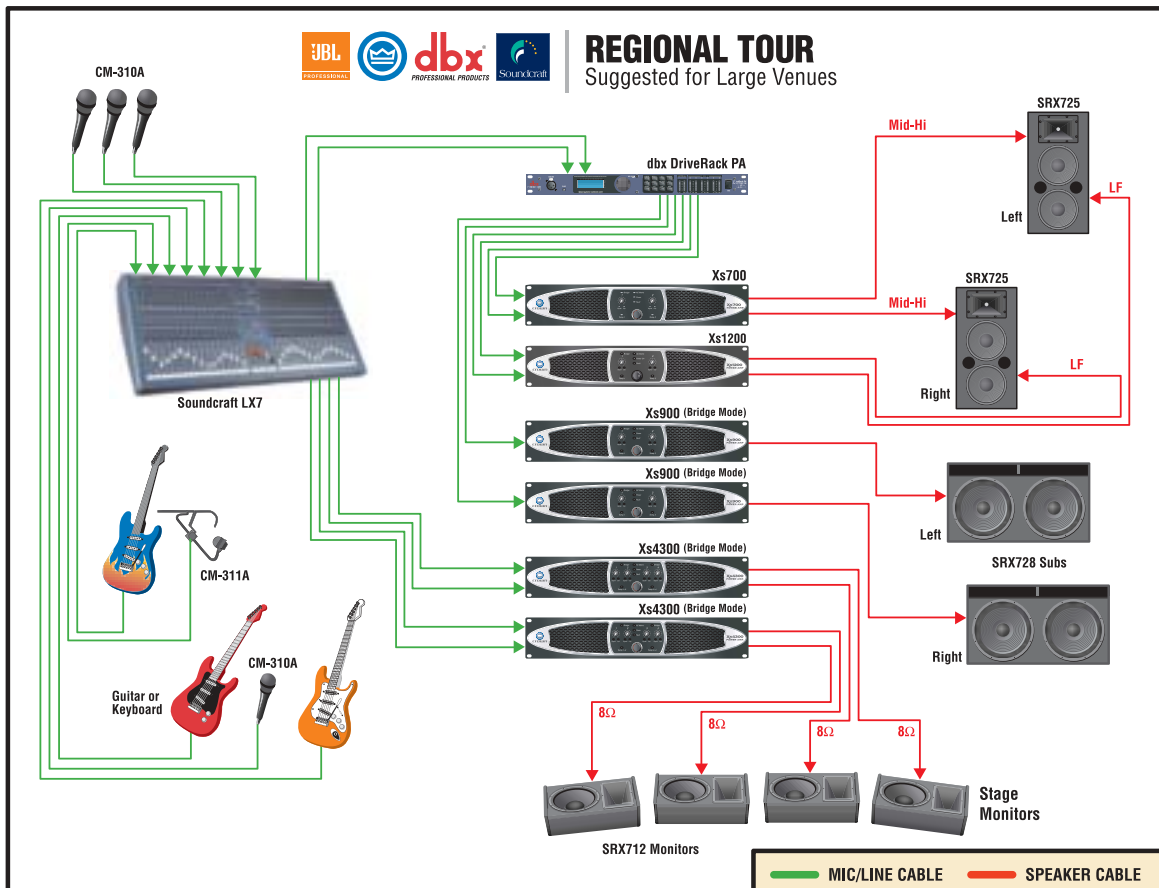
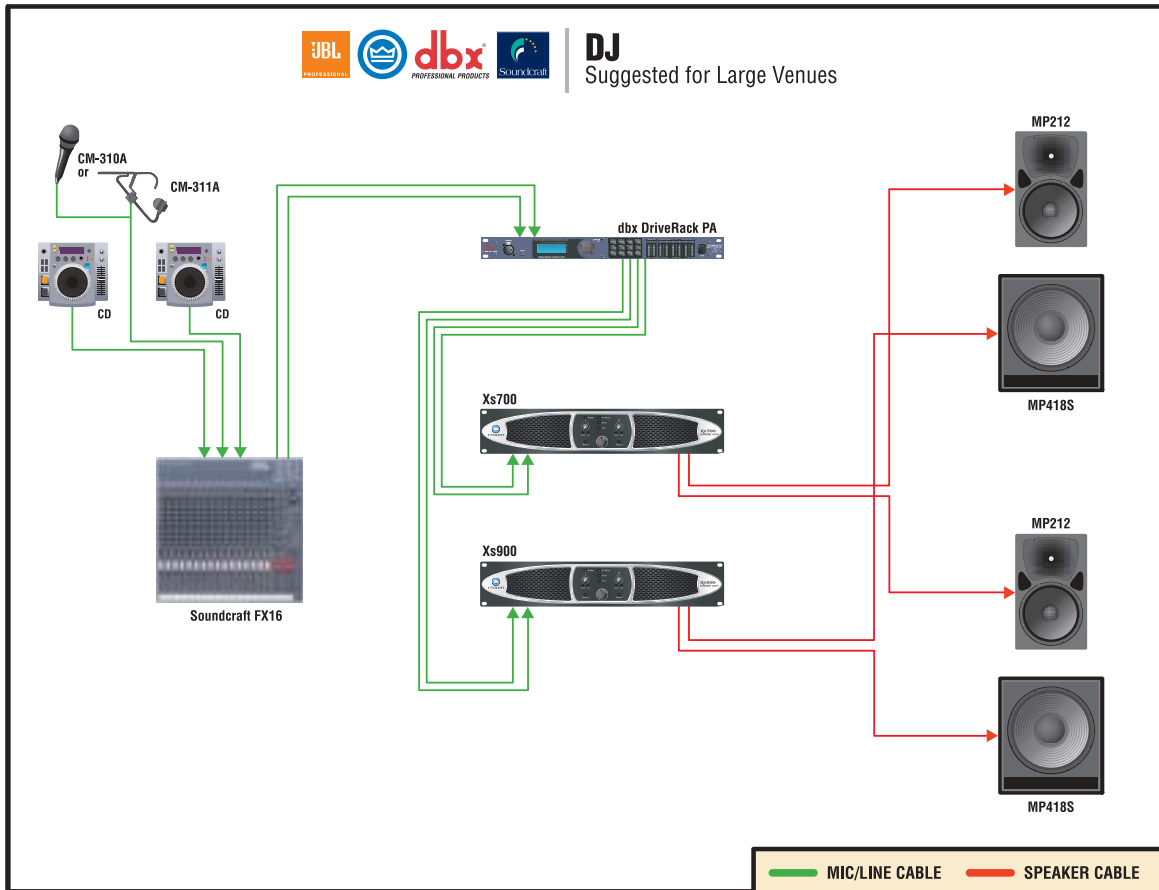
The XLS Series of power amplifiers from Crown represents a new era in affordable, quality power amplification. The line consists of three models in a uniform, rugged 2U chassis, incorporating the best of tried-and-true design principles and innovative features.

AMPLIFIERS } PORTABLE PA
Product Applications



AMPLIFIERS } PORTABLE PA

Product Applications







TOURING

I-Tech Series

MA-VZ Series

MA-02 Series

AMPLIFIERS } TOURING

I-Tech Series: Excellence Without Compromise

I-T4000, I-T6000, I-T8000



Excellence

} FEATURES

- Unmatched power in a 2U lightweight chassis.
- Global power supply with Power Factor Correction.
- Onboard DSP.
- Connects to Harman Pro HiQnet and Crown TCP/IQ™ network (CobraNet input available in optional CN models, coming soon).
- LCD control screen allows easy setup, diagnostics, and DSP presets for various loudspeakers.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge
I-T4000	1800W	2000W	1250W	3600W	4000W
I-T6000	2500W	3000W	1500W	5000W	6000W
I-T8000	3500W	4000W	2100W	7000W	8000W

*Guaranteed minimum power in watts at rated THD, 20 Hz - 20 kHz

*Maximum average power in watts at 0.35% THD, 20 Hz - 20 kHz

} SPECIFICATIONS

Frequency Response (at 1 watt, 20 Hz - 20 kHz): $\pm 0.25\text{dB}$.

Signal to Noise Ratio below rated full-bandwidth power, A-weighted: $> 105\text{ dB}$

Total Harmonic Distortion (THD) at full rated power: $< 0.35\%$.

Intermodulation Distortion (IMD) 60 Hz and 7 kHz at 4:1, from full rated output to -35 dB : $< 0.35\%$.

Damping Factor (20 Hz to 100 Hz, 8 ohms): > 5000 .

Crosstalk (below rated power, 20 Hz to 1 kHz): $> 80\text{ dB}$.

Common Mode Rejection (CMR) (20 Hz to 1 kHz): $> 50\text{ dB}$.

DC Output Offset (shorted input): $< \pm 3\text{ mV}$.

Input Impedance (nominal): 20 kilohms balanced, 10 kilohms unbalanced.

Maximum Input Level: $+15\text{ dBu}$ or $+22\text{ dBu}$, depending on input sensitivity.

Latency (analog, digital inputs): 1.13 mS analog, 1.81 mS digital (96 kHz).

A/D, D/A Converters: 24-bit 96 kHz Cirrus Logic.

Digital Input: AES/EBU, 24-bit, 32-96 kHz.

Onboard sample rate converter.

Network: Onboard HiQnet and TCP/IQ, compatible with standard 100 Mb Ethernet hardware.

DSP: 24-bit conversion with 32-bit, floating-point DSP processing. Has 64 assignable filters with 9 different filter types. Includes all-pass filters, over 2 seconds of delay available per channel, and dual uncorrelated-noise and sine-wave generators.

Load Supervision: Monitors the average impedance on the output of the amplifier. If the impedance falls outside the specified high/low limits, this function alerts the user via the front panel display, and via the IQwic software when amp is on an IQ Network.

Error Reporting: Reports clip errors, thermal errors, fault conditions and load monitoring errors for each channel via the front panel display and via Harman Pro *System Architect* or IQwic software when amp is on an HiQnet or IQ Network.

Attenuators: Speed-sensitive rotary encoders, 0.5 dB steps, range 0 to -100 dB .

Load Impedance (Note: Safe with all types of loads): Stereo: 1/2/4/8/16 ohms. Bridge Mono: 2/4/8 ohms.

Input Sensitivity for rated output/8 ohms: Adjustable in 0.1V steps from 1.4V to 7.75V.

Voltage Gain:

I-T4000: 37.1 dB to 22.2 dB.

I-T6000: 37.9 dB to 23.0 dB

I-T8000: 39.3 dB to 24.5 dB

Required AC Mains: Universal AC input, 100-240VAC, 50/60 Hz ($\pm 15\%$). Maximum AC mains voltage 277VAC.

Power Cord Connector: Five cordsets supplied with amplifier (USA, UK, European, Australia, India).

Front Panel Controls

Power Switch: Push-on/push-off switch with built-in green AC mains present indicator.

LCD Control Screen and Controls: These let the user adjust the amplifier's attenuation and muting, configure the amp, set up and view error monitoring (such as temperature and load supervision), and recall DSP presets. The presets allow the user to quickly reconfigure the amp for various applications.

LCD Control Screen: Integrated LCD with white LED backlight, controls amplifier setup and operation. Normal mode: Attenuation in 0.5 dB steps, Mute/Unmute, Front Panel Lockout.

Basic Menu: LCD Contrast, CH1 Sensitivity, CH2 Sensitivity, Speaker Preset, Dual/Bridge mode, Input Y.

Advanced Menu: Attenuator Limits, Attenuator Link, Clip Limiter, Peak Voltage Limiter, Average Power Limiter, Pink Noise Generator, AES/EBU Input Trim, Input Source, Maximum Analog Input, Meter Display Type.

Monitor Menu: Speaker Load, Thermal %, AC Voltage, Operating Time, Firmware, Manufacturing Info, Networking, Thermal Errors, Clip Errors, Low Limit Load Errors, High Limit Load Errors, Line Voltage Errors.

Menu/Exit Button: "Menu" enters the main menu. "Exit" gets out of the Menu.

Next Button: Selects the next item in the Menu.

Prev Button: Selects the previous item in the Menu

Level Controls (Encoders): These two knobs affect the Channel-1 and Channel-2 output levels. They also select Menu items and adjust parameter values that are displayed on the LCD Control Screen.

Back Panel Controls

Reset Switch/Circuit Breaker: Resets circuit breaker that protects power supply.

Front Panel Indicators

Bridge Mode Indicator: Yellow LED illuminates when the amplifier is set to Bridge-Mono mode.

Ready Indicator: Green LED, one per channel, illuminates when the channel is initialized and ready to produce audio output. Indicator is off when the amplifier is in standby mode via the IQ system.

Signal Indicators: Three green LEDs per channel indicate the amplifier's input and output signal levels.

Signal: input signal is above -40 dBu

-20 dB : amplifier output is 20 dB below clipping

-10 dB : amplifier output is 10 dB below clipping.

Clip Indicator: Red LED, one per channel, illuminates when the channel's output signal reaches the onset of audible clipping. The Clip Indicator also will illuminate during Thermal Level Control (TLC) limiting.

Thermal Indicator: Red LED, one per channel, illuminates when the channel has shut down due to thermal stress or overload.

Fault Indicator: Red LED, one per channel, flashes when the amplifier output channel has stopped operating.

Data Indicator: Yellow LED indicates HiQnet/IQ

TCP/IP data activity. Data indicator flashes only when the amplifier is polled for data, or is polled to see whether it is online.

Power Indicator: Blue LED indicates amplifier has been turned on and AC power is available. The LED will flash when the AC line voltage is 15% above or below the nominal rated range.

AC Mains Present Indicator: Green indicator built into power switch indicates AC power is present at the power cord and the amplifier circuit breaker is in the "on" position.

Back Panel Indicators

Data Indicator: Yellow LED indicates HiQnet/IQ TCP/IP data activity. Data indicator flashes only when the amplifier is polled for data, or is polled to see whether it is online.

Preset Indicator: Yellow LED flashes to signal the number of the current preset if active.

Input Connectors

Analog Input Connectors: A 3-pin female XLR connector for each channel.

Digital Input Connector: A 3-pin female XLR connector that accepts a digital signal in the AES/EBU format.

Network Connector: This Ethernet connector accepts an RJ-45 connector for HiQnet or TCP/IQ networking. Built into the connector is a yellow LINK ACT indicator that shows network activity, and a green 100Mb indicator that shows a 100Mb network connection.

Output Connectors

Two high-current, 50A Neutrik® Speakon® (mates with NL4FC or NL4), one per channel. Two pairs of high-current, 60A color-coded 5-way binding posts (for banana plugs, spade lugs or bare wire). Two male XLR passive analog loop through. XLR active/re-clocked AES/EBU digital loop through.

Power Connector: Standard 20 amp IEC inlet. Voltage range is indicated above IEC inlet.

Cooling: Dual-zone, microprocessor controlled, continuously variable speed fans, front-to-back airflow.

Construction: Cast aluminum front panel with integrated handles.

Dimensions: 19 in. (48.3 cm) W x 3.5 in. (8.9 cm) H x 16.2 in. (41.1 cm) D.

Weight: 28 lbs (12.7 kg) net, 36 lbs (16.3 kg) shipping.

Included Accessories: Rear rack ears with integral EZ-Rack Pin, rack screws, operation manual, power cords, foam air filter.

Regulatory Certifications



Other Applications



HIQNET
Harman IQ Network

TOURING

The Crown® I-Tech Series offers amazing power, light weight and ease of use for touring sound and installed sound applications. Onboard DSP provides a wide array of signal processing, greatly reducing the need for rack components and rack wiring. Onboard DSP features 24-bit, 96 kHz A/D and D/A converters. All models are compatible with the HiQnet Network and TCP/IQ networking. Digital audio and HiQnet/IQ control signals connect to the amp via a single CobraNet cable in optional CN models, coming soon. Pushbutton DSP presets simplify the setup for various loudspeaker arrays. The Global Power

Supply works anywhere in the world, and offers PFC (Power Factor Correction). It is a switching power supply for reduced weight. I-Tech amplifiers have the highest output voltage in the industry (200V peak), which provides clean transient peaks. The 3rd-generation patented Class I (BCA®) circuitry couples power efficiently to the load and allows low AC current drain. A front-panel control screen shows advanced diagnostics and status information.

AMPLIFIERS } TOURING

Macro-Tech VZ® Series: Advanced VZ Technology

Macro-Tech 3600VZ, Macro-Tech 5002VZ



VZ Technology

} FEATURES

- Crown's Grounded Bridge design provides lower distortion and superior reliability.
- Patented ODEP (Output Device Emulation Protection) circuitry compensates for overheating and overload to keep the amplifier working when others would fail.
- Articulated VZ power supplies for each channel provide excellent crosstalk characteristics and the best power matching to your load.
- MA-3600VZ works with PIP modules and MA-5002VZ works with PIP2 modules that tailor the amplifier to suit specific applications.
- Two mono modes (Bridge-Mono and Parallel-Mono) for driving a wide range of load impedances.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge	16-ohm Bridge
MA-3600VZ	1,800W	1,565W	1,120W	3,505W	3,140W	—
MA-5002VZ	2,500W	2,000W	1,300W	5,000W	4,000W	2,600W

*Maximum average power in watts at 0.1% THD, 1 kHz.

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.1 dB.

Phase Response (at 1 watt, 10 Hz to 20 kHz): ± 10 degrees.

Signal-to-Noise Ratio (below rated full bandwidth power), A-weighted: > 105 dB.

Total Harmonic Distortion (THD) (at rated power):

MA-3600VZ: 20 Hz to 1 kHz: $< 0.05\%$.
20 kHz: $< 0.1\%$.

MA-5000VZ: $< 0.05\%$ true THD

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1):

MA-3600VZ (from 368 milliwatts to full rated output): $< 0.05\%$.

MA-5002VZ (from rated power to 35 dB below rated power at 8 ohms): $< 0.05\%$.

Damping Factor (8 ohm) 10 Hz to 400 Hz: > 1000 .

Voltage Gain (8-ohm load, rated output at 1 kHz, at maximum level setting, $\pm 6\%$ or ± 0.5 dB):

MA-3600VZ: 124.6:1 or 41.9-dB at 0.775-volt sensitivity; 69.2:1 or 36.8 dB at 1.4-volt sensitivity; 20:1 or 26 dB at 26-dB sensitivity.

MA-5002VZ: 132.1:1 or 42-dB at 0.775-volt sensitivity; 71:1 or 37 dB at 1.4-volt sensitivity; 20:1 or 26 dB at 26-dB sensitivity.

Controlled Slew Rate: > 30 volts/microsecond.

Input Impedance: (balanced, unbalanced):
20 k ohms, 10 k ohms.

Load Impedance:

MA-3600VZ: Safe with all types of loads. Rated for 2 to 8 ohms in Stereo, 4 to 8 ohms in Bridge-Mono, and 1 to 2 ohms in Parallel-Mono.

MA-5002VZ: Safe with all types of loads. Rated for 2 to 8 ohms in Stereo, 4 to 16 ohms in Bridge-Mono, and 1 to 4 ohms in Parallel-Mono.

DC Output Offset (shorted input): $< \pm 10$ millivolts.

Required AC Mains ($\pm 10\%$, -15%): 50/60 Hz; 100-, 120-, and 230- VAC ($\pm 10\%$) units are available. 230 VAC, 50/60 Hz units can be used with 220 and 240 VAC. 100 and 120 VAC units can draw up to 30 amps; 230 VAC units can draw up to 15 amps.

Power Draw at Idle: 90 watts or less.

Front Panel Controls

Level: Rotary detented level control, one for each channel.

Compressor (MA-5002VZ only): Controls the channel's error-driven compression. Selections include Off; Fast (4-millisecond attack, 300-mil-

lisecond release), and Slow (12-millisecond attack, 600-millisecond release).

Enable: Push button used to turn the amplifier on and off.

Back Panel Controls

Input Ground Lift: A two-position switch used to isolate the input audio signal grounds from the AC (chassis) ground to help prevent ground loops. MA-3600VZ switch affects phone inputs only.

Loudspeaker Offset Integration (MA-5002VZ only): Two-position switch for each channel turns on or off the loudspeaker protection, which protects against DC, off-center woofer cone movement, and unwanted subsonic and ultrasonic frequencies.

Sensitivity: Switch for each channel selects input sensitivity: 0.775 volts or 1.4 volts for standard 1-kHz power, or a 26 dB voltage gain.

Stereo/Mono: Switch selects Stereo, Bridge-Mono or Parallel-Mono mode.

VZ Mode (MA-5002VZ only): Switch for each channel controls the switching mode of the VZ power supplies.

Front Panel Indicators

Enable: Amber LED indicates amplifier is on and AC power is available.

Signal/IOC: Green LED for each channel flashes to show amplifier output. If a channel's output waveform differs from its input by 0.05% or more, the indicator flashes brightly to show distortion.

ODEP: Amber LED for each channel shows thermal-dynamic energy reserve. A lit indicator shows available reserve energy. If a channel has no reserve, its indicator will dim in proportion to ODEP limiting.

ILoad/Limit (MA-5002VZ only): Two-color (green/red) LED for each channel. Green indicates load current flowing out the amplifier; red indicates maximum current is being delivered to the load.

Input Connectors

3-pin female XLR and female TRS for each channel.

Output Connectors

MA-3600VZ: Two sets of 5-way, color-coded binding posts for banana plugs, spade lugs or bare wire (European models do not accept banana plugs).

MA-5002VZ: High-current output block accepts banana plugs, spade lugs or bare wire. A detachable output cover protects against accidental short circuits and dangerous electrical shock.

Protection

Macro-Tech amplifiers are protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC and turn-on/turn-off transients.

Cooling

Internal heat sinks, forced-air cooling for rapid heat dissipation.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B),

MA-3600VZ: 3.5-inch (8.9-cm) height and 16-inch (40.6-cm) depth behind the mounting surface.

MA-5002VZ: 5.25-inch (13.3-cm) height and 15.875-inch (40.3-cm) depth behind the mounting surface.

Weight

Net Weight,

MA-3600VZ: 55 lbs. 1.5 oz. (25.0 kg);
MA-5002VZ: 77 lbs. 9 oz. (35.2 kg).

Shipping Weight,

MA-3600VZ: 63 lbs. 10 oz. (28.9 kg);
MA-5002VZ: 88 lbs. 10 oz. (40.2 kg).

Accessories

IQ Network Accessories: Both accept most PIP modules. The MA-5002VZ accepts all current IQ-PIP modules. The MA-3600VZ can accept IQ-PIP LITE module when paired with the IQ-PIP USP2 Adapter Kit (some functionality will be limited).



Regulatory Certifications



MA-5002VZ



MA-3600VZ

Other Applications



INSTALLED



PORTABLE PA

All measurements apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

Our patented variable impedance (VZ®) technology permits the Macro-Tech 3600VZ and the Macro-Tech 5002VZ to dynamically adapt to both signal and load requirements, providing the best power match to the widest range of loads. These models pack large amounts of power into a compact package while achieving ultra-low distortion and without generating excessive heat. Detented controls, PIP expandability and comprehensive status indicators are included. The Macro-Tech 5002VZ's universal power supply adapts to available voltages around the world.

TOURING

AMPLIFIERS } TOURING

Macro-Tech 02 Series: Advanced Reinforcement

Macro-Tech 602, Macro-Tech 1202, Macro-Tech 2402,



Advanced

} FEATURES

- Enhanced PIP2™ (Programmable Input Processor) connector accepts new accessory modules that tailor the amplifier for specific applications.
- Balanced XLR and 1/4-inch phone jacks for each channel on the standard PIP-FXQ module.
- Full Protection from shorted, open and mismatched loads, general over-heating, DC, high-frequency overloads, and full internal fault protection are provided by our “Quad-Mute” protection scheme.
- Two mono modes (Bridge-Mono and Parallel-Mono) for driving a wide range of load impedances.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge	16-ohm Bridge
MA-602	400W	325W	220W	750W	655W	450W
MA-1202	675W	480W	310W	1,300W	970W	620W
MA-2402	1,050W	800W	520W	2,070W	1,585W	1,035W

*Maximum average power in watts at 0.1% THD, 1 kHz.

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.1 dB.

Phase Response (at 1 watt, 10 Hz to 20 kHz): ± 10 degrees.

Signal-to-Noise Ratio (below rated full bandwidth power), A-weighted: > 105 dB.

Total Harmonic Distortion (THD) (at rated power), 20 Hz to 1 kHz: $< 0.05\%$
At 20 kHz: $< 0.1\%$.

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1) from 163 milliwatts to full bandwidth power: $< 0.05\%$.

Damping Factor (8 ohm) 10 Hz to 400 Hz: > 1000 .

Crosstalk (below rated power), 20 Hz to 1 kHz: > 85 dB.

Voltage Gain (at maximum level setting, $\pm 6\%$)
MA-602: 35-dB gain at 0.775-volt sensitivity; 30-dB gain at 1.4-volt sensitivity.

MA-1202: 36-dB gain at 0.775-volt sensitivity; 31-dB gain at 1.4-volt sensitivity.

MA-2402: 38-dB gain at 0.775-volt sensitivity; 33-dB gain at 1.4-volt sensitivity.

Controlled Slew Rate: > 13 volts/microsecond.

Input Impedance: (balanced, unbalanced): 20 k ohms, 10 k ohms.

Load Impedance: Safe with all types of loads. Rated for 2 to 8 ohms in Stereo, 4 to 16 ohms in Bridge-Mono, and 1 to 4 ohms in Parallel-Mono.

DC Output Offset (shorted input): $< \pm 10$ millivolts.

Required AC Mains ($\pm 10\%$, -15%): 50 / 60Hz, 100-240VAC.

Power Draw at Idle: 100 watts or less.

Front Panel Controls

Enable: A push button used to turn the amplifier on and off.

Level: A rotary control for each channel with 31 detents used to control the output level.

Back Panel Controls

Stereo/Mono: A three-position back panel switch used to select Stereo, Bridge-Mono or Parallel-Mono mode.

Reset (Macro-Tech 2402 only): A push button for each channel, used to reset the circuit breaker that protects each power supply.

Input Ground Lift: This switch on the PIP2-FXQ is used to isolate input signal grounds from chassis ground to prevent ground loops.

Other Controls

Sensitivity: A three-position switch inside the PIP compartment used to select the input sensitivity for both channels: 0.775 volts or 1.4 volts for standard 1 kHz power, or a 26 dB voltage gain.

Front Panel Indicators

Enable: This amber indicator shows the on/off status of the low-voltage power supply.

Signal/IOC: Each channel has a green indicator that flashes to show amplifier output. If a channel's output waveform differs from its input by 0.05% or more, the indicator flashes brightly to show distortion. This function provides proof of distortion-free performance. In Parallel-Mono mode, the Channel 2 light stays on.

ODEP: Each channel has an amber indicator that shows thermal-dynamic energy reserve. Normally, each ODEP indicator is lit to show available reserve energy. In the rare event that a channel has no reserve, its indicator will dim in proportion to ODEP limiting. An ODEP indicator may also turn off under other conditions.

Input Connectors

Factory-installed PIP2-FXQ provides one 3-pin female XLR connector for each channel in parallel with one 1/4-inch phone jack connector for each channel.

Output Connectors

Two sets of 5-way, color-coded binding posts for banana plugs, spade lugs or bare wire (European models do not accept banana plugs).

Protection

Macro-Tech amplifiers are protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC and turn-on/turn-off transients.

Cooling

Flow-through ventilation from front to side panels. Internal heat sinks with forced-air cooling for rapid, uniform heat dissipation.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9-cm) height and 16-inch (40.6-cm) depth behind the mounting surface.

Weight

Net Weight,

MA-602: 39 lbs. 9 oz. (17.9 kg);

MA-1202: 44 lbs. 1 oz. (20.0 kg);

MA-2402: 51 lbs. 12 oz. (23.5 kg).

Shipping Weight,

MA-602: 44 lbs. (19.9 kg);

MA-1202: 47 lbs. (21.3 kg);

MA-2402: 65 lbs. (29.5 kg).

Accessories

Cooling fan option, level control shaft lock.

IQ Network Accessories: Accepts most PIP modules. Can accept IQ-PIP LITE module when paired with the IQ-PIP USP2 Adapter Kit (some functionality will be limited).



Regulatory Certifications



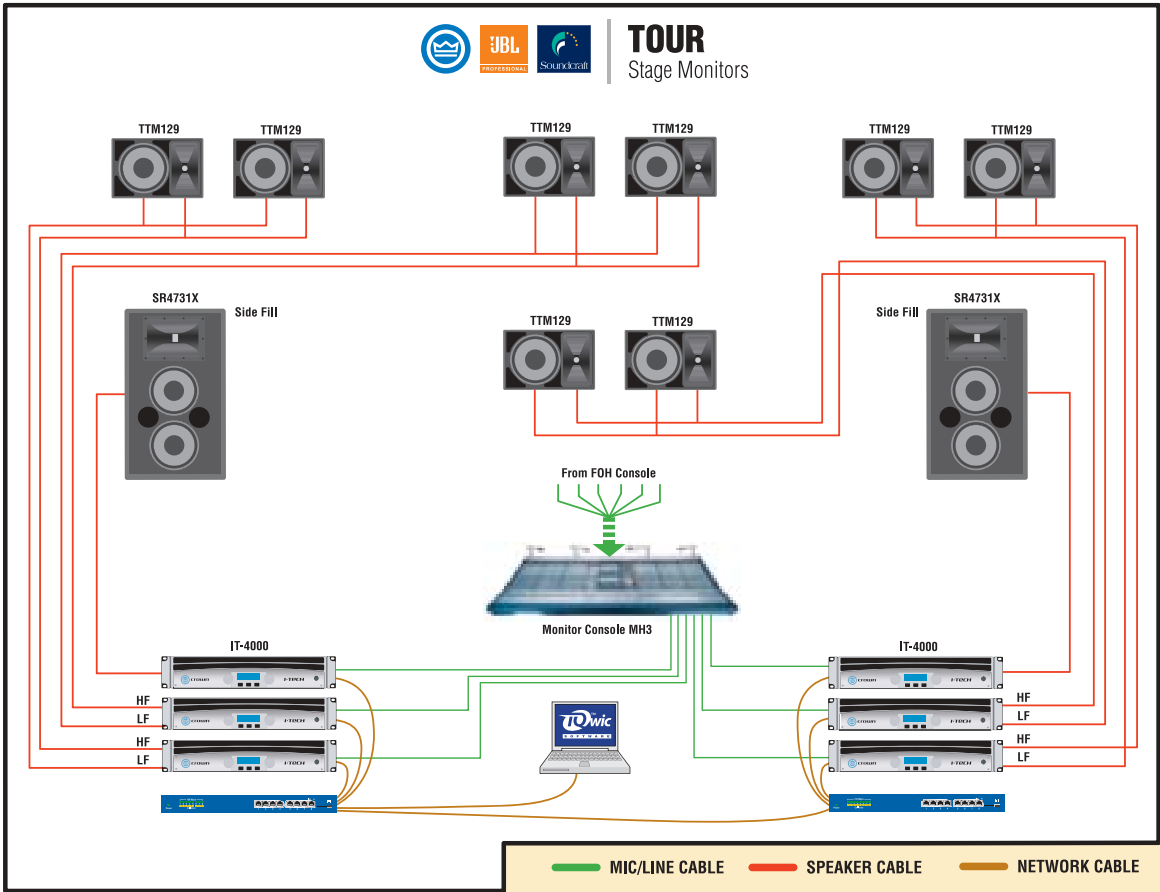
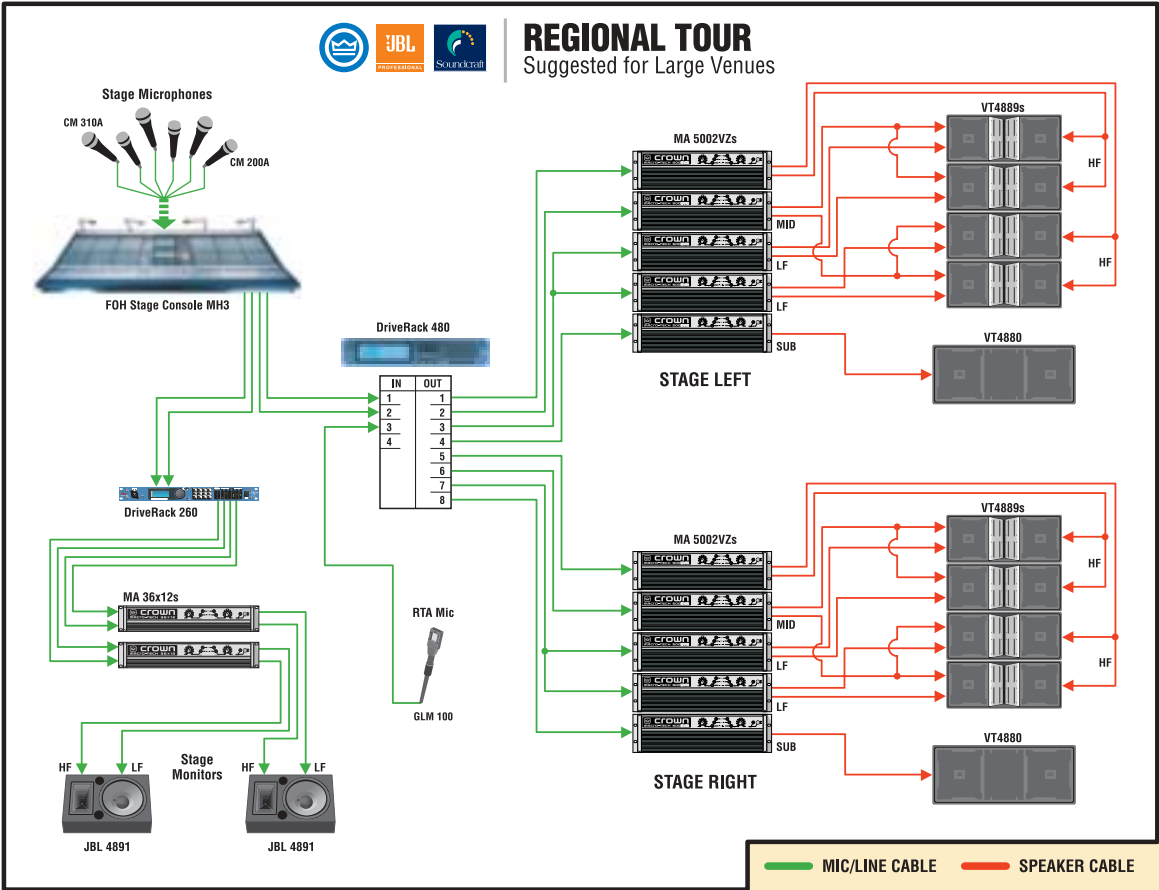
Other Applications

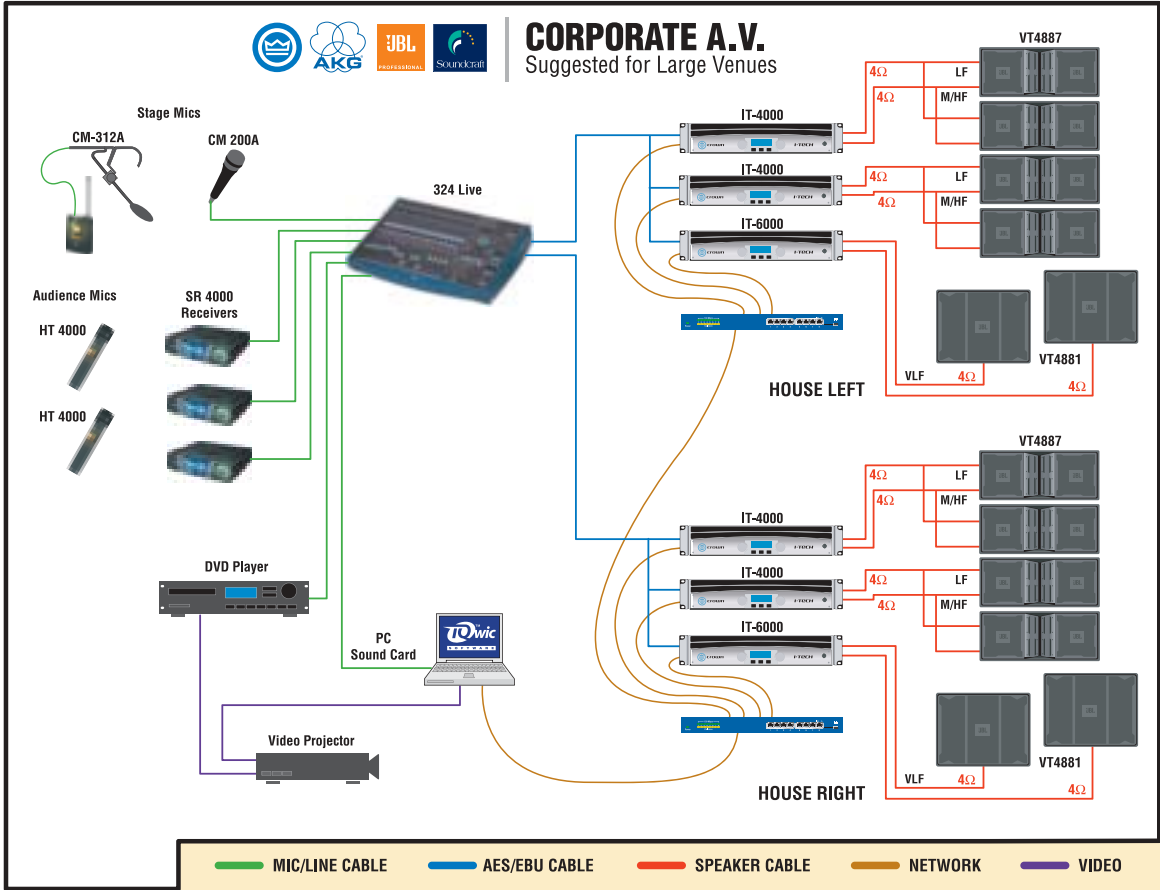
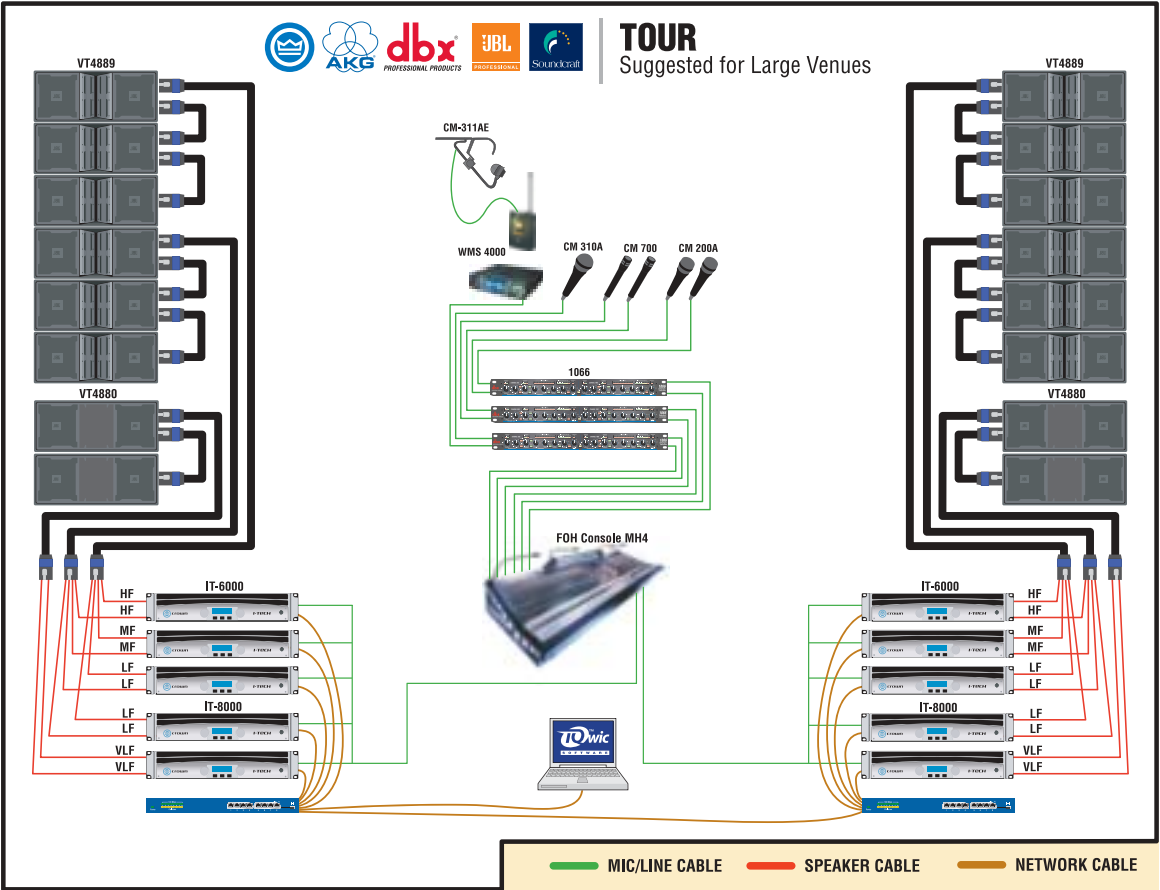


All measurements apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

The Macro-Tech® 02 Series amplifiers deliver superior sonic accuracy and enormous amounts of power from a low-profile design—perfect for touring and fixed installations. Crown's patented ODEP® (Output Device Emulation Protection) and Grounded Bridge™ output circuitry enhance reliability and virtually eliminate distortion. Dual, Bridge-Mono or Parallel-Mono modes allow you to optimize power to your loads, while IOC (Input/Output Comparator) circuitry acts as a supersensitive distortion meter, giving proof of distortion-free performance.

TOURING





crown k2

BALANCED CURRENT AMPLIFIER



crown k2

BALANCED CURRENT AMPLIFIER



crown k2

BALANCED CURRENT AMPLIFIER



crown k2

BALANCED CURRENT AMPLIFIER





RECORDING & BROADCAST

Studio Reference Series

K Series

D Series

AMPLIFIERS } RECORDING & BROADCAST
 Studio Reference Series: The Industry Reference
Studio Reference I, Studio Reference II



Benchmark

} FEATURES

- Super-low harmonic and intermodulation distortion provide the best transfer function in the business.
- Ultra-high damping factor delivers superior loudspeaker motion control for the cleanest, tightest, chest-thumping bottom end you've ever felt—or heard.
- Extremely wide dynamic range.
- Crown's Grounded Bridge design provides low distortion and superior reliability.
- IOC (Input/Output Comparator) circuitry immediately alerts you of any distortion that exceeds 0.05% to provide dynamic proof of distortion-free performance.

POWER OUTPUT*

Model	4-ohm Dual (per channel)	8-ohm Dual (per channel)	8-ohm Bridge	16-ohm Bridge
Studio Reference I	1,190W	800W	2,375W	1,595W
Studio Reference II	565W	360W	1,145W	720W

*Maximum average power in watts at 0.1% THD, 1 kHz.

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.1 dB.

Phase Response (at 1 watt, 20 Hz to 20 kHz): +5 to -15 degrees.

Signal-to-Noise Ratio (below rated full bandwidth power), A-weighted:
Studio Reference I: > 120 dB.
Studio Reference II: > 117 dB.

Total Harmonic Distortion (THD) (at rated power), 20 Hz to 20 kHz: < 0.1%.

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1):
Studio Reference I: Less than 0.005% from full bandwidth power to 78 watts rising linearly to 0.025% at 78 milliwatts.

Studio Reference II: Less than 0.005% from full bandwidth power to 36 watts rising linearly to 0.025% at 36 milliwatts.

Damping Factor, 10 Hz to 400 Hz: >20,000.

Voltage Gain (at maximum level setting, ± 1 dB):
Studio Reference I: 40-dB gain at 0.775-volt sensitivity; 35-dB gain at 1.4-volt sensitivity; 26-dB gain at 26-dB sensitivity.

Studio Reference II: 37-dB gain at 0.775-volt sensitivity; 32-dB gain at 1.4-volt sensitivity; 26-dB gain at 26-dB sensitivity.

Crosstalk (below rated power, 20 Hz to 20 kHz):
Studio Reference I: > 70 dB.
Studio Reference II: > 65 dB.

Common Mode Rejection (CMR)(20 Hz to 1 kHz): >70 dB.

Input Impedance: (balanced, unbalanced): 20 k ohms, 10 k ohms.

Load Impedance: Safe with all types of loads. Rated for 4 to 8 ohms in Stereo mode; 8 to 16 ohms in Bridge-Mono mode; 2 to 4 ohms in Parallel-Mono mode.

Output Impedance: Less than 10 milliohms in series with 2.5 microhenries.

DC Output Offset (shorted input): < ± 2 millivolts.

Required AC Mains ($\pm 10\%$): 50/60Hz, 100 to 240 VAC.

Power Draw at Idle: 90 watts or less.

Front Panel Controls

Enable: Push button used to turn the amplifier on and off.

Level: 31-detent, rotary level control, one for each channel.

Meter On/Off: Turns the meters on or off.

Meter Display Mode: Sets the display mode for the front-panel meters: Dynamic range of the output signal in dB or output levels in dB.

Back Panel Controls

Ground Lift Switch: Two-position switch isolates the input phone jack and AC (chassis) grounds.

Sensitivity Switch: Selects the input sensitivity for both channels: 0.775 or 1.4 volts for standard 1 kHz power, or a 26-dB voltage gain.

Stereo/Mono: Selects Stereo, Bridge-Mono or Parallel-Mono mode.

Reset: Resets the AC mains circuit breaker.

Front Panel Indicators

Enable: Shows the on/off status of the unit's low-voltage power supply.

Signal: Flashes to show audio output in each channel.

IOC: Flashes if the output waveform differs from the input waveform by 0.05% or more. The LEDs act as sensitive distortion indicators to provide proof of distortion-free performance. In Parallel-Mono mode, the Channel 2 IOC light stays on.

ODEP: An LED for each channel shows thermal-dynamic energy reserve. Lit LED indicates available reserve energy. If a channel has no reserve, its indicator will dim in proportion to ODEP limiting.

Dynamic Range/Level Meter: Displays either the dynamic range of the output signal in dB (factory default), or the output level in dB. As dynamic range meters, they show the ratio of the peak to average power of each channel. As output level meters, they show the output levels relative to standard 1 kHz power.

Input Connectors

Two balanced phone jacks on the back panel and two balanced three-pin XLR connectors on the factory-installed P.I.P.-FX module.

Output Connectors

Two sets of color-coded, 5-way binding posts accept banana plugs, spade lugs or bare wire. (European models do not accept banana plugs.)

Protection

Studio Reference amplifiers are protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature, chain destruction phenomena, input overload damage and high-frequency blowups. They also protect loudspeakers from input/output DC and turn-on/turn-off transients by means of a 4-second turn-on delay.

Cooling

Convection cooling with assistance from the computerized, on-demand proportional cooling fan.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 7-inch (17.8-cm) height and 16-inch (40.6-cm) depth behind the mounting surface.

Weight

Net Weight:

Studio Reference I: 60 lbs. 11 oz. (27.6 kg);
Studio Reference II: 56 lbs. 2 oz. (25.5 kg).

Shipping Weight:

Studio Reference I: 74 lbs. 3 oz. (33.7 kg);
Studio Reference II: 69 lbs. 10 oz. (31.6 kg).

Accessories

IQ Network Accessories: Accepts most PIP modules. Can accept IQ-PIP Lite module when paired with the IQ-PIP USP2 Adapter Kit (some functionality will be limited).



Regulatory Certifications



Other Applications



All measurements apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

Studio Reference Series™ amplifiers are engineered for the critical demands of recording studios. Featuring an extremely wide dynamic range and ultra-low harmonic and intermodulation distortion, these amps provide the best sonic accuracy in the business. They also feature a damping factor of better than 20,000 for a tight, well-defined low end. Patented ODEP circuits detect and compensate for any demanding load condition, while optional PIP modules let you customize the amplifier to your needs.

RECORDING & BROADCAST



Performance

} FEATURES

- Sealed chassis—no fan, no noise!
- Patented Class “I” (BCA) circuit design.
- Unmatched thermal efficiency; superior energy efficiency.
- TLC -Thermal Level Control protection subtly and dynamically reduces gain as needed.
- Significantly less component degrading heat generated.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	8-ohm Dual (per channel)	4-ohm Bridge	8-ohm Bridge
K1	750W	550W	350W	1,500W	1,100
K2	1,250W	800W	500W	2,500W	1,600

*Maximum average power in watts at 0.1% THD, 1 kHz.

} SPECIFICATIONS

Performance

Frequency Response: ± 0.25 dB from 20 Hz to 20 kHz. The frequency response is band limited with an 8 Hz double integrated 3rd-order Butterworth high-pass filter and a 32 kHz 7th-order Gaussian low-pass filter.

Signal to Noise Ratio (Unweighted): >100 dB below rated power.

Voltage Gain (at maximum level setting): 31.5 dB (K1) or 33.1 dB (K2) with input sensitivity set to 1.4V.

26 dB with input sensitivity set to 26 dB.

Damping Factor: $> 3,000$ from 10 to 400 Hz

Input Stage: Input is electronically balanced and employs precision 1% resistors.

Input Impedance: Nominally 20 k ohms balanced and 10 k ohms unbalanced.

Input Sensitivity: 1.4 volts for standard 1 kHz power, or 26 dB gain.

DC Output Offset: ± 10 millivolts.

Line Voltage Requirements: Universal power supply can be configured to operate with 100, 120, 200, 220, 230, 240, 250 VAC at 50 or 60 Hz. Adapters are available through an Authorized Crown Service Center.

Front Panel Controls

Level: A calibrated rotary level control for each channel.

Power: An on/off rocker switch.

Back Panel Controls

Input Sensitivity: A two-position switch for each channel located near each channel's input connectors. Can be set to 1.4 V for full output into an 8 ohm load or a fixed voltage gain of 26 dB.

Bridge Output: An on/off switch near each channel's input connectors which, when turned on, bridges the two output channels for twice the output voltage.

"Y" Input: An on/off switch located between the input connectors which, when turned on, parallels the two input channels.

Front Panel Indicators

TLC: An LED for each channel indicates the amplifier's unique Thermal Level Control (TLC) circuitry is starting to make subtle and dynamic gain reductions to reduce heat rather than shut down. Unlike competitive amps, which may thermal out, Crown's TLC insures your show goes on.

Clip: An orange LED for each channel which turns on when distortion of any type becomes audible in the amplifier output.

IOC™: The yellow input/output comparator indicators are sensitive distortion indicators that turn on long before distortion is audible. This circuit compares the actual waveforms of the input and output and immediately alerts you of any distortion that exceeds .05% to provide dynamic proof of distortion-free performance.

Signal: A green LED for each channel which flashes dimly when a very low-level signal (as low as 10 mW) is present in the output. They flash brightly when a louder signal (at least 1 watt) is present at the output.

Enable: A green LED that illuminates when the amplifier has been turned on and has power. When first turned on, there will be a brief two-second delay while the amplifier performs a quick turn-on diagnostic, and then illuminates the enable indicator to full brightness. If no signal is present, the Enable indicator will switch to a dim level.

Input Connectors

One balanced 1/4-inch phone jack and one 3-pin female XLR connector for each channel.

Output Connectors

Two sets of color-coded binding posts for banana plugs, spade lugs or bare wire (European models do not accept banana plugs.)

Protection

Advanced protection circuitry guards against shorted outputs, open circuits, DC, mismatched loads, general overheating, high-frequency overloads, and internal faults. Also includes TLC, out-of-band filtering, inrush limiting and fuse.

Cooling

High performance passive convection cooling system allows the amplifier to drive 2-ohm loads to high music sound levels (8 dB into clip) in a 40° C (104°F) environment.

Dimensions

Standard 19-inch (48.3 cm) rack mount width (EIA RS-310-B), 3.5-inch (8.9 cm) height and 16-inch (40.6 cm) depth behind front mounting surface.

Weight

Center of gravity is approximately 6 inches (15.2 cm) behind front mounting surface.

K1: 32 pounds (14.6 kg).

K2: 38 pounds (17.3 kg).

For shipping weight, add 6 pounds (2.7 kg) to each amplifier's weight.

Regulatory Certifications



Other Applications



All measurements apply to units in Stereo mode with 8-ohm loads and rated input sensitivity unless otherwise specified.

Using patented Balanced Current Amplifier (BCA) circuitry, K Series amplifiers give you massive amounts of power while generating just one-tenth the heat of conventional amplifiers. In fact, the K2 can deliver an amazing 1,250 watts per channel into 2 ohms! No cooling fan is needed, making the amp maintenance-free. Highly efficient, the amplifier draws only 12 watts at idle, letting you realize significant savings over its life. And the sound? Tight, chest-slammng low end, crystal-clear highs and a well-defined midrange.

RECORDING & BROADCAST



Tried & True

} FEATURES

- Powerful AB+B class circuitry yields maximum efficiency with minimum crossover "notch" distortion.
- IOC® (Input/Output Comparator) alerts of any distortion that exceeds 0.05% to provide proof of distortion-free performance.
- Ultra-low harmonic and intermodulation distortion result in the best dynamic transfer function in the industry.
- Very low noise and wide dynamic range exceed the audio specifications for digital compact discs (CDs).
- Convection cooling system dissipates heat through the heat sinks and chassis for optimal cooling and maintenance-free operation.
- Front-panel headphone jack.

POWER OUTPUT*

Model	4-ohm Dual (per channel)	8-ohm Dual (per channel)	16-ohm Dual (per channel)	8-ohm Bridge	16-ohm Bridge
D-45	35W	25W	20W	70W	50W
D-75A	55W	40W	25W	110W	80W

*Maximum average power in watts at 0.1% THD, 1 kHz.

} SPECIFICATIONS

Performance

Frequency Response (at 1 watt) 20 Hz to 20 kHz: ± 0.1 dB.

Phase Response (from 20 Hz to 20 kHz at 1 watt): +10 to -15 degrees.

Signal-to-Noise Ratio below rated power (20 Hz - 20 kHz): 106 dB.

Total Harmonic Distortion (THD) at full bandwidth power: 0.05% from 20 Hz to 20 kHz.

Intermodulation Distortion (IMD) (60 Hz and 7 kHz at 4:1) from 0.25 watts to full bandwidth power: < 0.01%. from 0.01 to 0.25 watts: < 0.05%.

Damping Factor, from DC to 400 Hz: > 400.

Crosstalk (below rated power): 100 Hz to 1 kHz, > 100 dB.

Input Impedance (nominally balanced, nominally unbalanced): 20 k ohms, 10 k ohms.

Input Sensitivity: Configurable for 26 dB gain or 0.775-volt sensitivity.

Load Impedance: Safe with all types of loads. Rated for 4 to 16 ohms in Dual mode, 8 to 16 ohms in Bridge-Mono mode.

AC Line Voltages Available ($\pm 10\%$): 100, 120, 200, 220 and 240 VAC, 50 to 400 Hz for international units (depending on the transformer configuration). North American 120 VAC, 60 Hz units are not convertible and can only be used at the specified voltage and frequency. All units draw 15 watts or less when idle.

Front Panel Controls

Power: A two-position rotary on/off switch.

Level: An independent detented front-panel level control for each channel.

Dual/Mono: A jumper located inside the amplifier selects between dual and mono operation.

Front Panel Indicators

Signal Presence: The green front-panel indicator for each channel flashes synchronously with the channel's output signal to indicate its presence.

Input/Output Comparator: The red Input/Output Comparator (IOC) indicator for each channel flashes if any type of distortion reaches 0.05%.

Input Connectors

A balanced 3-pin female Neutrik combination XLR and 1/4-inch phone connector for each channel.

Output Connectors

Barrier block terminals and stereo headphone jack. The headphone output is unpadded, and in parallel with the main amplifier outputs.

Protection

Input: The inputs have series resistance that provides input overload protection. Controlled slew rate voltage amplifiers protect against radio frequencies. The AC line is fused to protect against excessive current draw.

Output: Instantaneous limiting protection for short circuits, open circuits and mismatched loads.

Turn-On: Minimum thumps. Power-up is instantaneous with no program delay.

Construction

Durable black finish on aluminum front panel with gray suede Lexan insert. Aluminum chassis provides maximum heat conduction and minimum weight.

Cooling

The amplifier is totally convection cooled. The entire aluminum chassis acts as a conductor to dissipate heat. The covers and front-panel extrusion also act as heat sinks. Much of the unit's heat is conducted through the extruded front panel. This design is used so the front panel contact with the equipment rack will also dissipate heat.

Dimensions

EIA Standard 19-inch (48.3-cm) rack mount width (EIA RS-310-B), 1.75-inch (4.5-cm) height and 8.5-inch (21.6-cm) depth behind the mounting surface, and a 0.624-inch (1.6-cm) protrusion in front of the mounting surface.

Weight

Net Weight,

D-45: 8 lbs. 11 oz. (3.9 kg);

D-75A: 9 lbs. 7 oz. (4.3 kg).

Shipping Weight,

D-45: 10 lbs. 9 oz. (4.8 kg);

D-75A: 11 lbs. 4 oz. (5.1 kg).

Regulatory Certifications



Other Applications



All measurements apply to units in Dual mode with both channels driven into 8-ohm loads and an input sensitivity of 26 dB gain unless otherwise specified.

The D-45 and D-75A are long-term standards. They are perfect for moderate power applications such as recording or broadcast studio near-field monitoring, video suite audio monitoring, a recording/broadcast headphone amp or a small paging system. Convection cooled, the highly reliable D Series is protected against shorted, open, mismatched or low-impedance loads.

RECORDING & BROADCAST





CINEMA

CTs 2-Channel Series

CTs Multi-Channel Series

CL Series

CE Series

XLS Series

DBC Network Bridge



CTs 2-Channel

FEATURES

- High power density. All two channel models in a 2U chassis.
- New Crown Switching Power Supply for lighter weight.
- Selectable "Constant-Voltage" or low-impedance operation per channel.
- 100V direct outputs on CTs 2000, CTs 3000.
- Fully PIP2-compatible.

POWER OUTPUT*

Models	2-ohm Dual (per channel)	4-ohm Dual (per channel)	70V Dual (per channel)	4-ohm Bridge
CTs 600	150W**	300W	300W	300W**
CTs 1200	250W**	600W	600W	500W**
CTs 2000	1,000W	1,000W	1,000W	2,000W
CTs 3000	1,500W	1,500W	1,500W	3,000W

*Maximum average power in watts at rated THD, 20 Hz - 20 kHz.

** At 1 kHz.

CTs Multi-Channel

FEATURES

- High power density: Four-channel model in a 2U chassis, eight-channel model in a 3U chassis.
- New Crown Switching Power Supply for lighter weight.
- Selectable "Constant-Voltage" or low-impedance (4/8 ohm) operation per channel-pair.
- 100V direct outputs.
- New "FIT" (Fault Isolation Topology) circuitry isolates fault conditions without affecting neighboring channels.
- Accept new MC accessory modules.



POWER OUTPUT*

Models	All channels driven			All channel pairs driven 8-ohm Bridge
	4-ohm Dual	8-ohm Dual	70V Dual	
CTs 4200	260W	200W	220W†	520W
CTs 8200	200W	160W	200W†	400W

*Maximum average power in watts at 1kHz at 0.1% THD.

†Constant Voltage full-bandwidth power ratings support 100 Hz to 20 kHz due to automatic high-pass filters.



Marunouchi Plaza, Japan.

Note: For more information about the products featured in this section, please refer to following pages:

CTs 2-Channel	page 4
CTs Multi-channel	page 6
CL Series	page 10
CE Series	page 22
XLS Series	page 24

Regulatory Certifications

THX CTs 600, CTs 1200, CTs 4200, CTs 8200 CL1, CL2, CE 1000, CE 2000TX

HIQNET Harman IQ Network **CTs Series**

FC **CE** CTs, CL, CE and XLS Series

ETL CTs, CL and XLS Series **SP** CE Series

AMPLIFIERS } CINEMA

CL, CE and XLS Series

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	4-ohm Bridge
CL1	560W	450W	1,100W
CL2	975W	660W	1,950W
CL4	1,400W**	1,200W	2,800W**

*Maximum average power in watts at 0.5% THD, 1 kHz.

**+200V line voltage provides 1,800W (2 ohm stereo) and 3,600W (4 ohm bridge-mono).



CL Series

} FEATURES

- Low impedance compatibility for applications where high power, low impedance loads are the primary requirement.
- Rear panel detented level controls allow for accurate level settings and secure operation.
- "Contractor Correct" barrier strip output connectors allow for quick and easy connection, regardless of the load.
- Active crossover with signal routing available with optional System Solution Topology modules.
- Accurate, uncolored sound with very low distortion for the best in music and voice reproduction.

CE Series

} FEATURES

- Handles 2-ohm loads.
- Front-panel detented level controls.
- Function indicators, fan-assisted cooling, short-circuit protection.
- Class "I" (BCA) circuitry in CE 4000 offers extra power and efficiency.
- Selectable high-pass and low-pass filters in CE 4000.
- Works with SST modules that provide extra functions.



POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	4-ohm Bridge
CE 1000	560W	450W	1,100W
CE 2000TX	—	660W	—

*Maximum average power in watts at 0.5% THD, 1 kHz.

XLS Series



} FEATURES

- Housed in a rugged, all-steel 2U chassis.
- Efficient forced-air fan prevents excessive thermal buildup.
- Electronically balanced XLR inputs; touchproof binding post and Speakon outputs.
- Precision detented level controls, power switch, and four LEDs, which indicate clip for each channel, power and fault conditions.

POWER OUTPUT*

Model	2-ohm Dual (per channel)	4-ohm Dual (per channel)	4-ohm Bridge
XLS 202	250W	200W	400W
XLS 402	570W	400W	800W
XLS 602	840W	600W	1,200W

*Maximum average power in watts at 0.5% THD, 1 kHz.

CINEMA

Crown Cinema Systems employ quality Crown professional amplifiers along with optional amplifier accessories for the best in cinema sound. Crown's Digital B-Chain system, which provides the first all-digital cinema solution, employs Crown's CTs Series amplifiers, IQ Networking amplifier modules, and Crown's DBC Network Bridge for the first all-digital cinema solution.



DBC Network Bridge

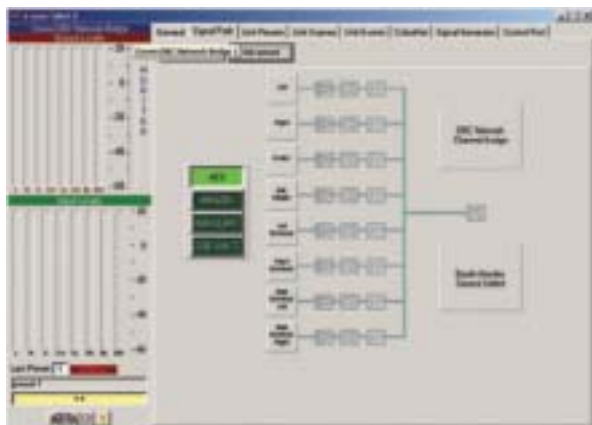
All-Digital Cinema Solution

At the heart of a Digital B Chain system, the Crown DBC Network Bridge allows you to distribute multiple channels of digital audio over standard fast Ethernet hardware and cabling for use in traditional, e-cinema and d-cinema applications.

The DBC Network Bridge accepts standard analog and/or AES digital audio and CobraNet™ digital channels from other Cinema processors (Dolby®, DTS®), Cinema Servers, or Alternative Content Media Players; and bridges them to a Crown DBC network.

This network is Crown's proprietary "Single-Click" solution that provides system control, monitoring, and digital audio transport. The DBC network (fed by the DBC Network Bridge) distributes the digital audio and system-wide control protocol to Crown amplifiers. The DBC Network Bridge also provides the necessary system equalization, which is stored and recalled via a series of presets for use in both feature film and alternative content programming.

Note: Regulatory certifications pending.



DBC Network Bridge control screen.



FEATURES

- Accepts 8 inputs (7.1 surround) via one of the following formats: AnalogAES/EBUCobraNet.
- Selectable mic or line auxiliary analog XLR inputs for alternative content.
- Primary and Secondary 100 Mb Ethernet "Single-Click" connection for DBC network.
- Front-panel LCD display and control functions of internal presets and system setup.
- Full 32-channel CobraNet digital audio transmit/receive capability.
- Enhanced matrix mixer capable of full 8x32 crosspoint matrix mixing.
- 24-bit/48 kHz converters.
- Studio-grade DSP with multiple filter banks for each channel (up to 256 filters).
- 32 presets, 32 scenes, and 32 events can be stored, labeled, and recalled.
- Analog monitoring of cinema processor inputs, pre-amp, or post-amp signals.
- Multiple-function control port for third-party automation/control.
- Internal clock/calendar for scheduling events.
- Auto leveling functions for dynamic volume control of auditoriums or lobby.
- Ambient leveling functions for maintaining maximum signal-to-noise ratio.
- Three-year, no-fault, fully transferable warranty.



Digital Circus, Raleigh, North Carolina, USA.





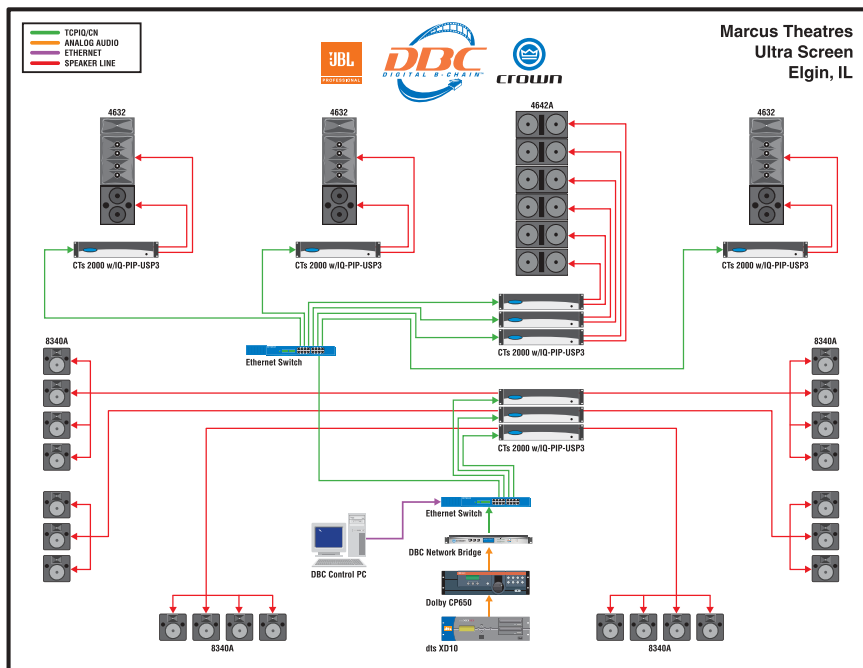
UltraScreen

Marcus Theatres Chooses Digital B-Chain™ For UltraScreen®

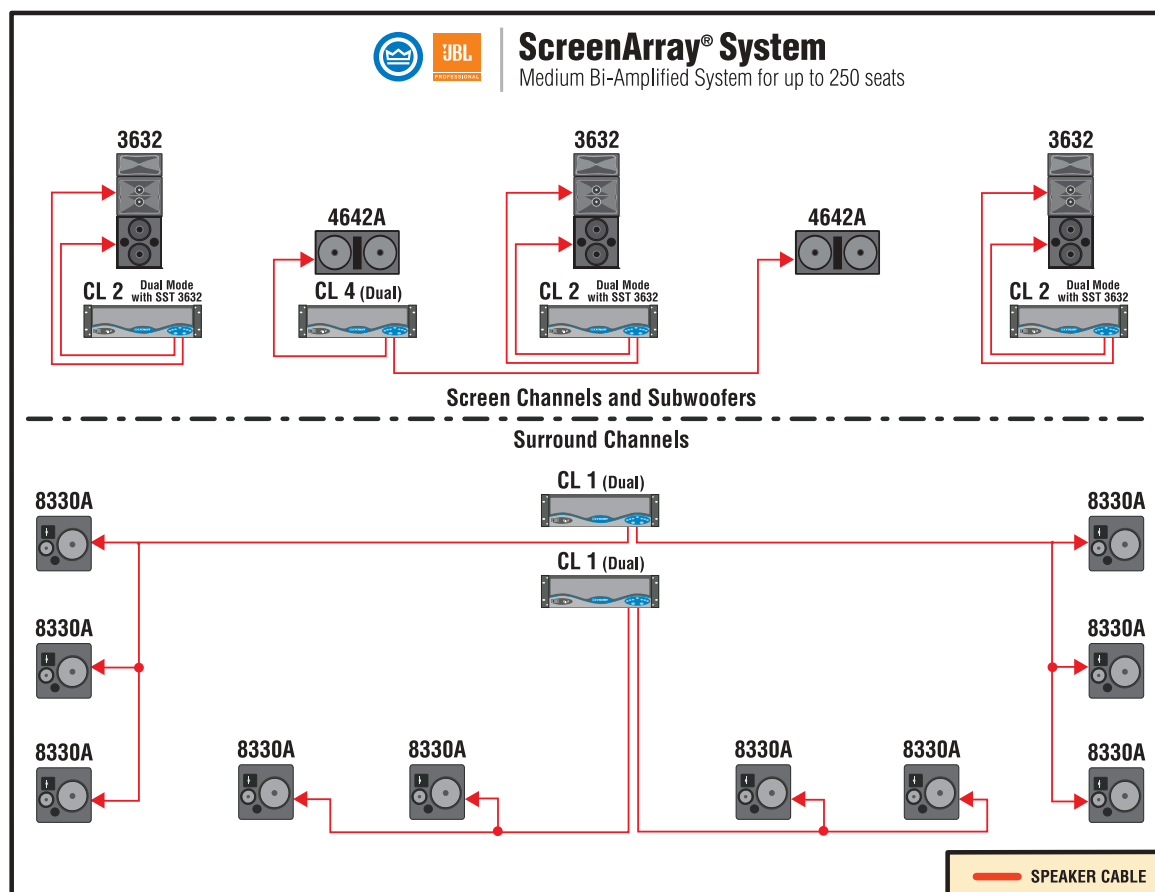
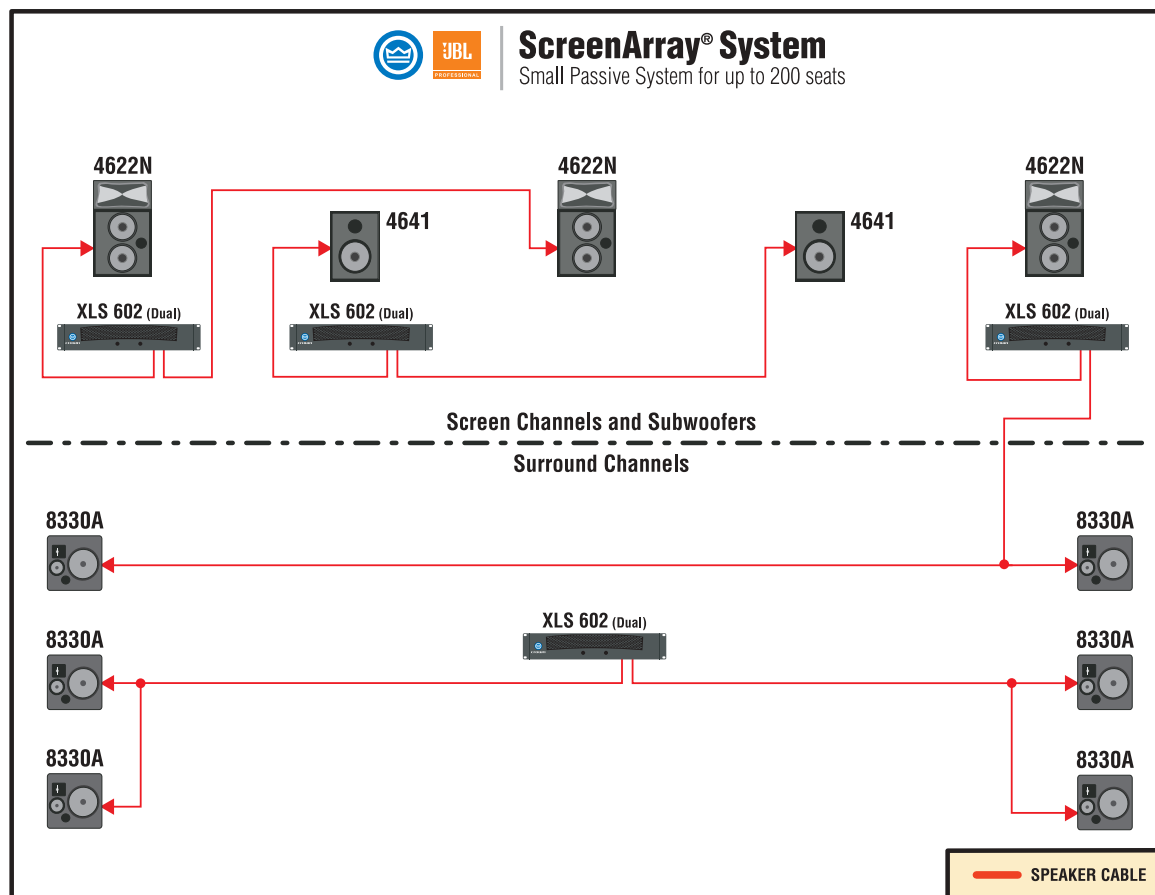
JBL Professional and Crown International products were used in the installation of a Digital B-Chain™ (DBC™) system at the Marcus Theatres Elgin Fox UltraScreen, a gigantic three-story tall screen which is a part of the new Marcus Elgin Fox Theatre in Elgin, Illinois. The 75-foot wide UltraScreen, the largest in the Midwest, features a state-of-the-art sound system comprised of the Crown® Digital B-Chain and JBL's Academy Award® winning ScreenArray® cinema systems. The screen opened on February 25, 2004.

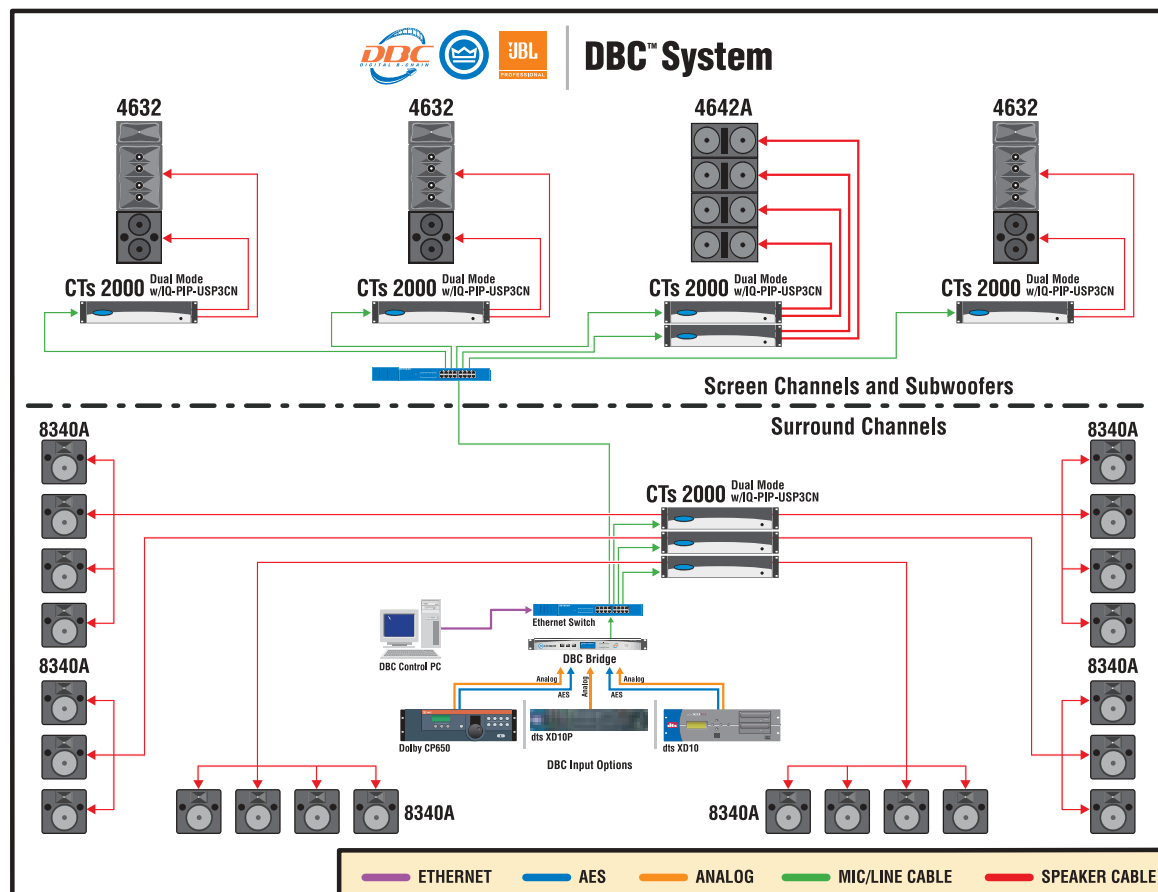
In a DBC system, analog or digital audio is received from the cinema processor and is then transported on a digital audio and control network where it remains in the digital domain to the amplifiers. In the Elgin system, analog audio is sent to nine Crown CTs Series amplifiers with IQ-PIP-USP3/CN modules, which power the ScreenArray screen channels, subs, and surround channels. Both the digital audio and control information is transported on a single network connection.

DBC systems include the capability of system-wide diagnostics. Automated error reporting allows technicians and users to learn about potential system errors before they happen and alerts technicians immediately of any problems, providing specific data on where to locate the problem. The entire audio system can be controlled and monitored on the same facility network as concessions management, box office ticketing, HVAC, etc., lowering infrastructure costs.



CINEMA





INPUTS

Referee
Microphone
GLM-100

Soundweb
London BLU32

Hard Disc Recorder

CD/Cassette

Announcer
CM-311AHS

Field Mic
CM-310A

Emergency
Mic
LM-201

IN	OUT
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
COM PORT	
Cat5net	
Control	

Control PC

CTs 600

CTs 600 w/L

CTs 600 w/US

CTs 1200 w/USP3C

CTs 2000 w/USP3CN

CTs 1200 w/USP3CN

CTs 1200 w/USP3CN

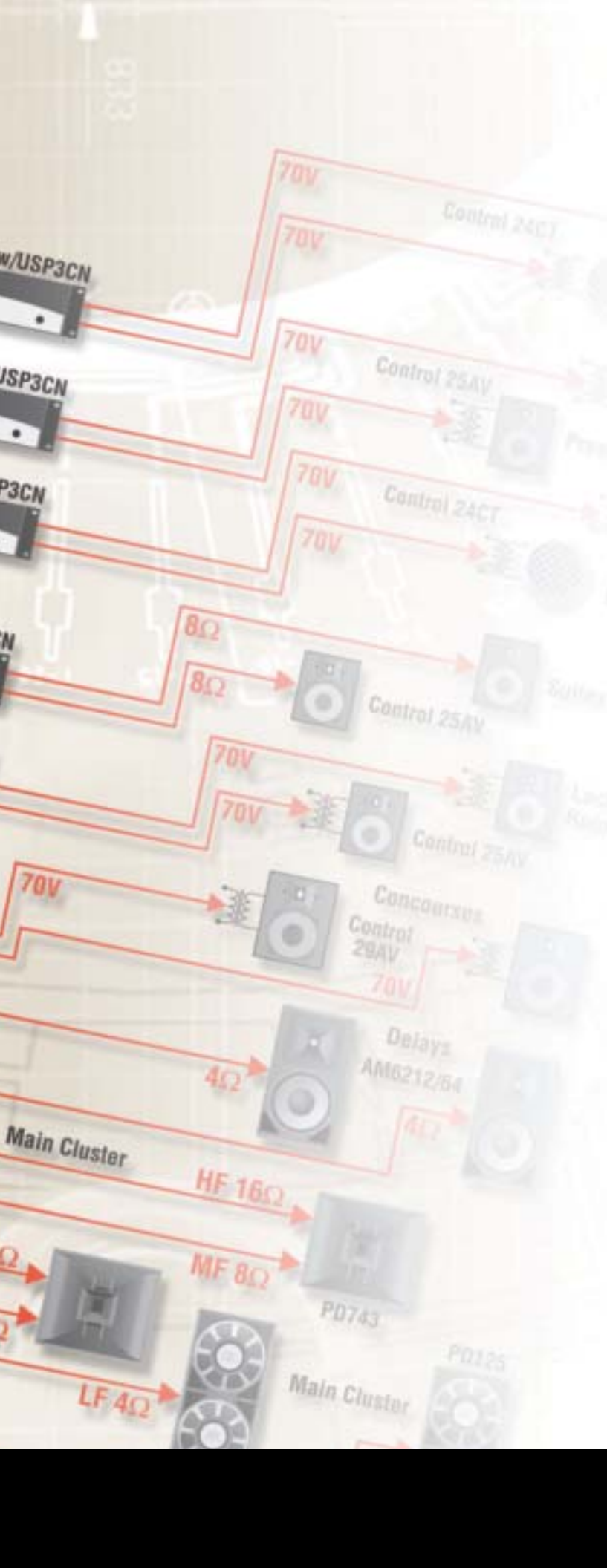
CTs 2000 w/USP3CN

CTs 3000 w/USP3CN

CTs 3000 w/USP3CN

HF 16

MF 8



IQ NETWORK

IQ Network

IQ Software

IQ Rackmount

IQ-PIPs

IQ Accessories



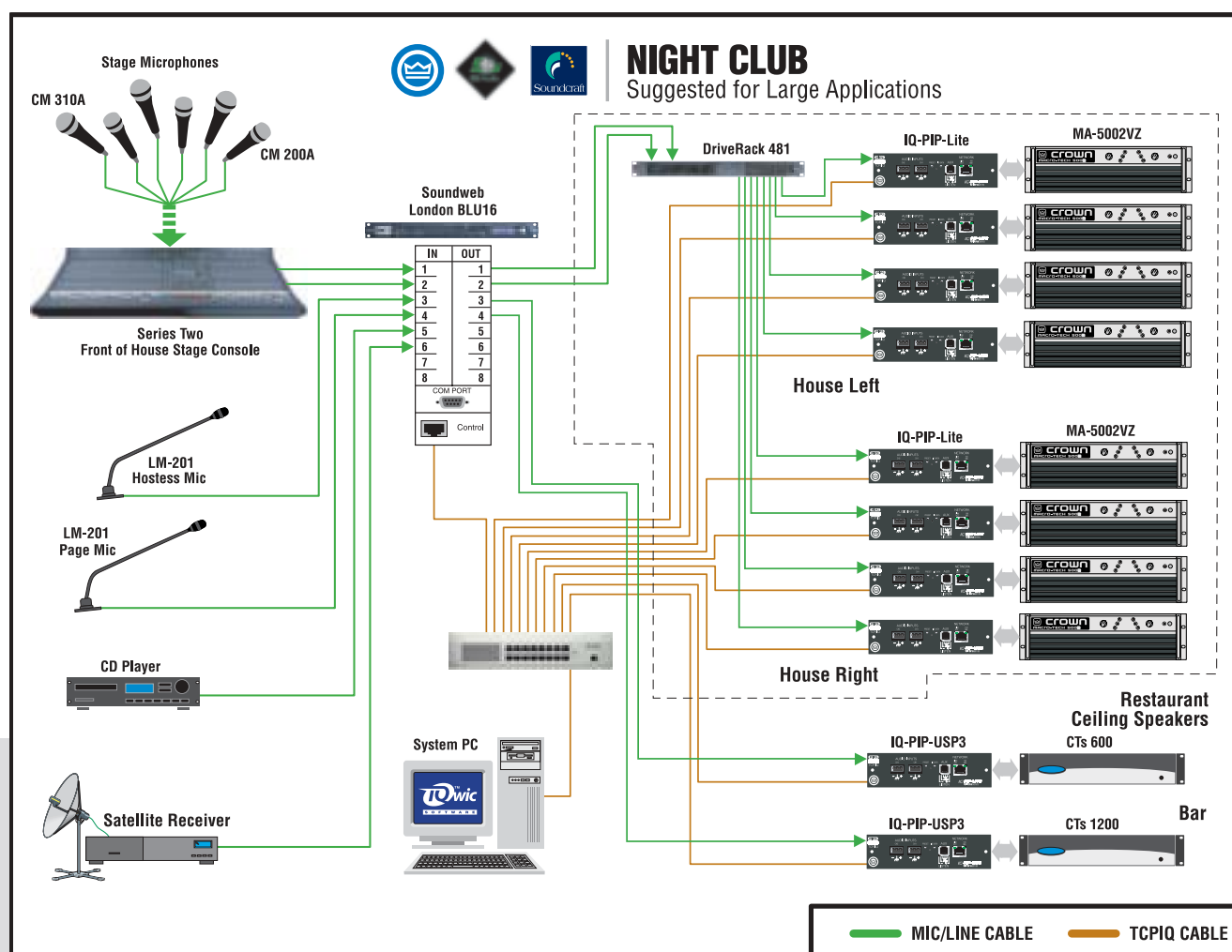
The Crown IQ Network provides a complete digital audio solution for a wide range of uses, including fixed applications such as stadiums and cinemas, as well as large touring applications. Using fast, 100-Mb, standard Ethernet networking hardware, IQ Network can provide digital audio distribution, monitoring and control, all on a single network cable.* And now, the system has been expanded, allowing control of TCP/IQ components from BSS's SoundWeb London Software.

Robust and very flexible, Crown's IQ Network uses the Crown TCP/IQ protocol, which provides transport, access, control and reporting for all computers, amplifiers and speakers on the network. Multiple computers can be added to the IQ network for easy access from several locations, or for simultaneous access by several users, as well as from both IQwic and SoundWeb London

*Digital audio transport provided via CobraNet™.



Complete Digital Audio Solution



software applications. The physical IQ Network can be wired, wireless, or both. With wireless capabilities and a laptop computer, system monitoring and correction can be performed instantly from anywhere in the facility.

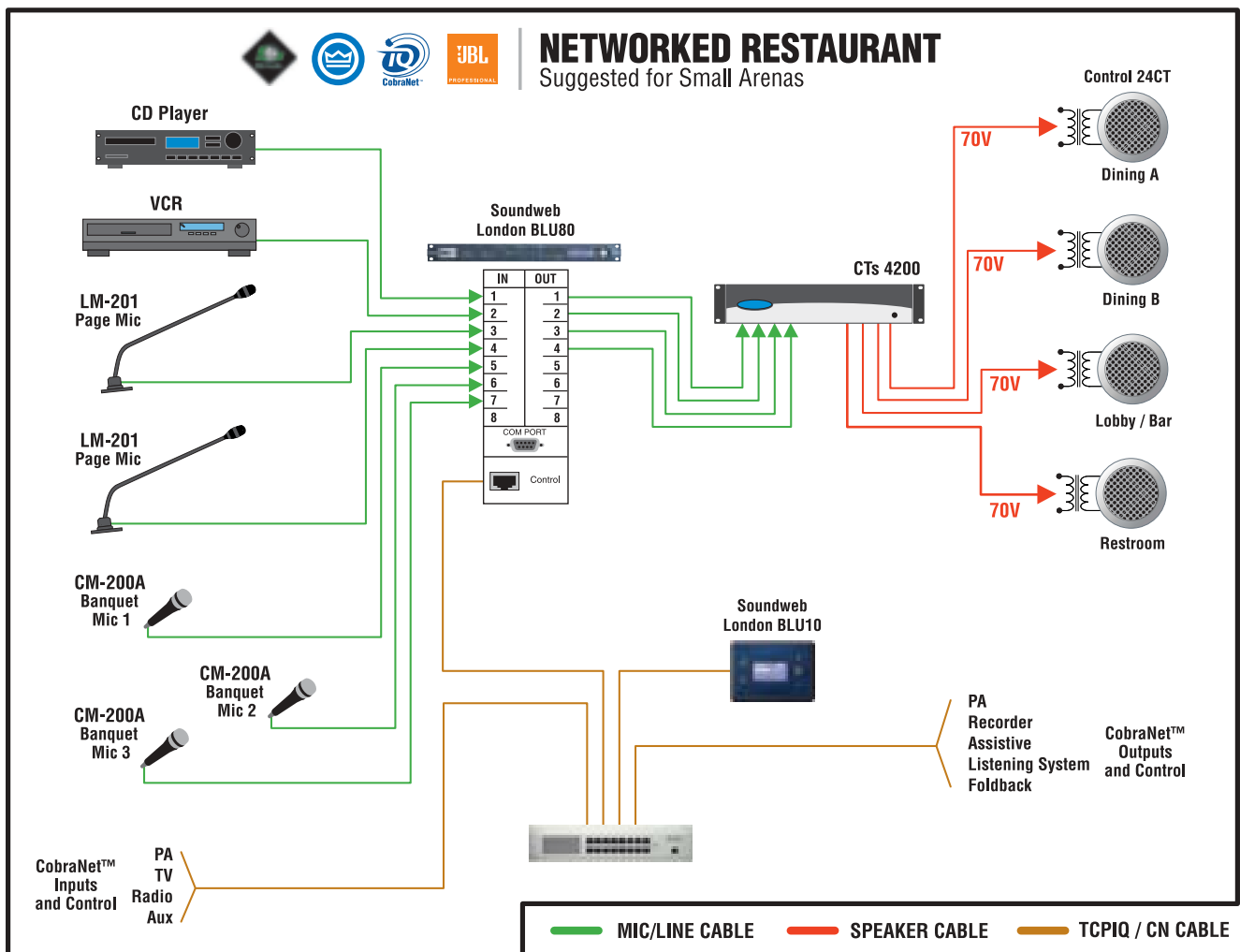
Designed for simplicity as well as flexibility, an IQ Network is simple to design, easy to install, and a breeze to use. A range of IQ-compatible components is available, each created to address real-world requirements, including control and monitoring, real-time load supervision, digital signal processing (including filters and delays), CobraNet™ network audio transport, and more.

Easy-to-install IQ-PIP modules can be quickly added to any IQ-compatible Crown amplifier, greatly extending its capabilities. In addition the I-Tech family of amplifiers comes with networkability built in.

With IQ Networking, your audio installation becomes smarter, more secure. Technicians can be immediately notified of problems, including specific information about where to locate the problem. Automated error reporting provides feedback based on parameters you define; warnings are delivered immediately, allowing problems to be diagnosed and corrected before they

interfere with system operations. Full visibility of other network users allows you to track other users on the network or to work with other users in real time.

IQ Network infrastructure requires only standard ethernet wiring and off-the-shelf network components, making an IQ Network reliable as well as economical. In fact, an IQ network can be implemented using an existing network infrastructure, without interfering with other network services such as HVAC, lighting, security, etc. For new installations, a single cable can be pulled for all required facility services.



IQ NETWORK

Crown's IQ Network is controlled by powerful yet easy-to-use IQ IQwic software, as well as Soundweb London. The intuitive interface provided in both IQwic™ and IQ for Windows software suites makes the system so easy to operate, even a novice can effectively use an IQ Network. Comprehensive on-line help for every operation and IQ component is just a click away.

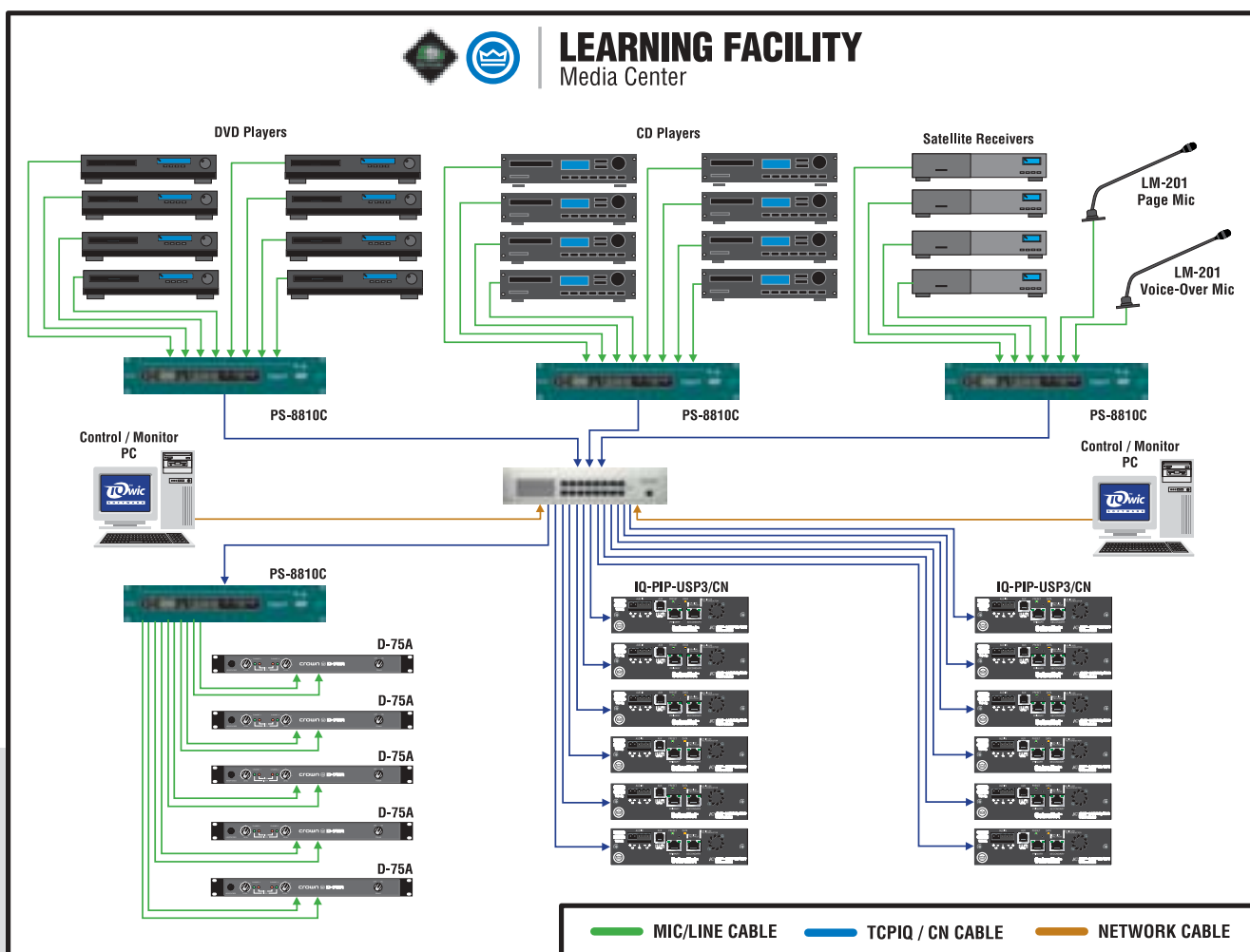
Beneath this simple interface, custom control features provide the in-depth control required by experienced audio professionals. Customized control screens can be designed to match the floor plans and functional flow of a facility, ensuring faster implementation and increased usability.

All software suites feature multiple levels of password security, which minimizes unauthorized use and makes security procedures more manageable than ever. Access can be easily defined for individual users, from system monitoring access only to full access for complete system configuration.



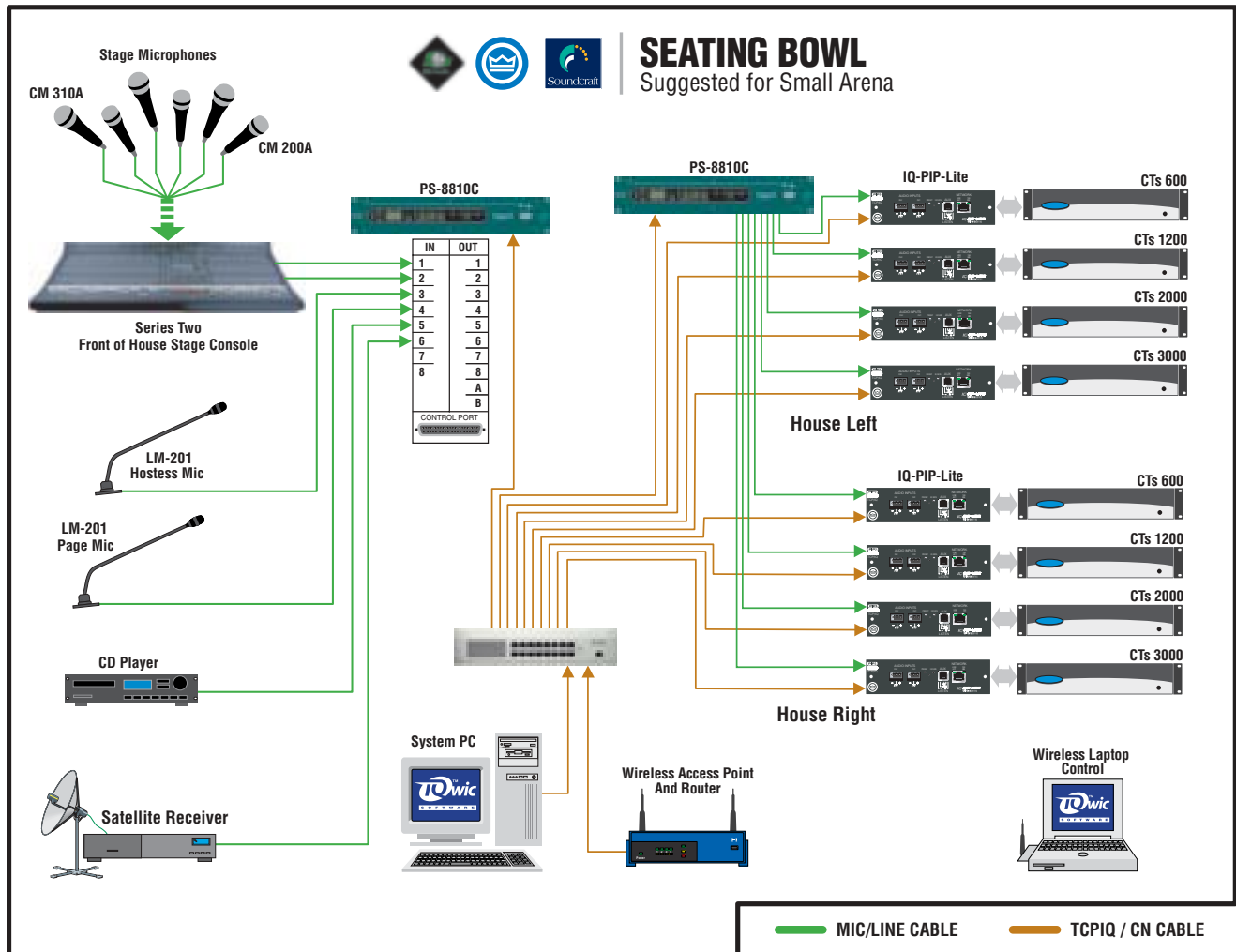
IQwic, short for IQ Windows Intelligent Control, offers all of the features and functions of prior IQ for Windows software, such as IQ's "drag and drop" functionality, then adds a new "system view" feature that shows product interconnections (including CobraNet audio signal routing) as well as product performance. IQwic allows you to control and monitor components that use either TCP/IQ (Ethernet) or the older IQ Bus (current loop) for control. The included IQ Gateway program consolidates the two different technology platforms so they appear within IQwic as one system—completely seamless to the installer or operator.

The IQ for Windows software suite allows you to control and monitor components that use the IQ Bus (current loop) for control. It also includes IQNET Server, which allows you to control an IQ Bus system from multiple computers over a TCP/IP network.



} ADVANTAGES

- Provides access to all servers, amplifiers and speakers on the network for quick, system-wide diagnostics.
- Automated error reporting allows technicians and users to learn about potential system errors before they happen.
- Alerts technicians immediately of any problems, providing specific data on where to locate the problem.
- Lower infrastructure costs—the entire audio system can be controlled and monitored on the same facility network being used by existing network services, such as concessions management, box office ticketing, HVAC, etc.
- Simple to design—components are pre-chosen, easy to install, and easy to operate.
- Full audio system control is available via custom control screens designed to match floor plan and functional flow, and the network allows for multiple computers to access the system in multiple locations.
- The system also provides security, notifying management if any speaker or amplifier is disconnected.



IQ NETWORK



IQ-USM 810

Processor/Mixer/Router—All In One

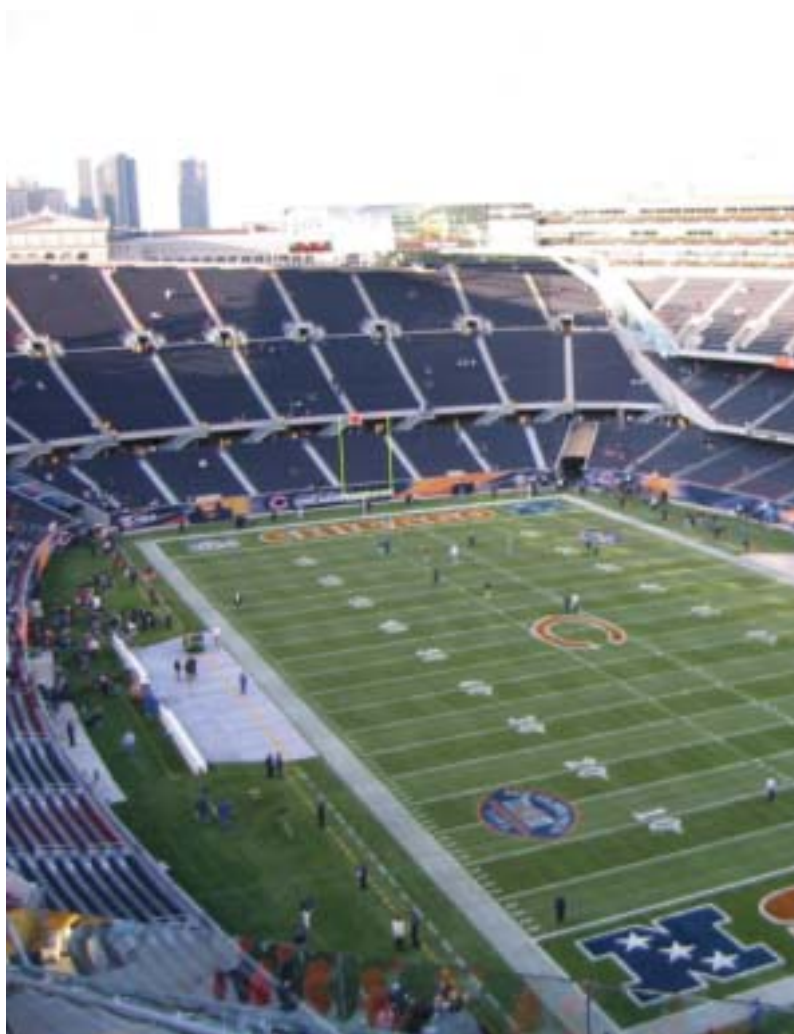


The Crown IQ-USM 810 is an 8x10 mixer/processor with unique dual input processing paths. As an IQ component, it can be controlled by an IQ Network, and with its distributed intelligence capability, can continue to operate even when an IQ Network is not connected. The IQ-USM 810 can also act as a system interface to other IQ components.

It features high-quality 24-bit A/D and D/A converters along with 240 MIPS of full 32-bit floating point DSP for optimum dynamic range.

FEATURES

- Input/Output filters and crossovers (128 in-box).
- Input signal delay (x16).
- Input gating (x16).
- Full auto leveling (x16).
- Input compressor (x16).
- Adaptive gating (x16).
- 8x8 adjustable mix/matrix.
- Output signal delay (x10) (0 to 2000 mS in 20mS steps).
- Ambient level compensation (x10).
- Output limiter (x10).
- 37-pin multi-function control port.
- True room combining features.
- 32 internal presets.
- 32 scheduler events indicators.
- True universal power supply (UPS) allowing 100-240 VAC at 50-60 Hz.
- Incorporated single-loop IQ interface.
- Full IQ Network control/monitoring using IQwic or IQ for Windows software.
- Adjustable NOM (Number of Open Mics) (x16).
- Assignable-function front panel LED.



Crown amps and IQ Network power new Soldier Field.



Monster Sound



One of the equipment rooms with Crown CTs amplifiers. Soundweb units by BSS Audio also shown.



Soldier Field, the home of Chicago's storied NFL football team the Chicago Bears, recently reopened after undergoing a massive renovation. The venerable old stadium, originally opened in 1924, had been the home field of the oldest team in the league for over 30 years. Though incremental refurbishments over the years extended the life of the facility, the team needed a new stadium on a par with other new facilities being built for NFL teams.

After considering several options for location, the city of Chicago determined it wanted to keep the team in the heart of the city and launched a project to renovate the existing facility as part of a larger Lakefront Improvement Plan for the immediate area. The high-tech outdoor stadium design retains much of the old architectural charm that distinguished it through the years, yet incorporates modern stadium design elements intended to position it as a world-class sporting venue. Key among those elements is the high-performance audio system. The system had to meet the performance goals set forth early in the planning stages for the stadium while accommodating the architect's aesthetic concerns. This meant, in part, creating many custom loudspeaker enclosures. It was immediately apparent to the capacity crowd during pregame opening festivities that the total experience of attending a Bears home game from now on will include rocking, high-energy sound.

The design and consulting firm Wrightson, Johnson, Haddon & Williams, Inc. (WJHW) of Dallas provided system design, with Kevin Day of WJHW providing sound system design and Jack Wrightson handling project management duties. System installation was completed by SPL Integrated Solutions (SPL), with Don Alberg serving as Project Engineer based in Baltimore, and LD Parker as Site Engineer / Superintendent, Skip Warrington as Project Manager, and Jim Mascenic as Site Manager, based out of SPL Chicago.

The game announcer uses a Crown CM-311AHS headset microphone, with Crown's patented Differoid® noise-canceling response. This version of the CM-311A is designed to be mounted on headphones for broadcaster use. The mic signal is fed to a Soundcraft K2 console, then to a dbx 160A compressor. Soundweb™ products by BSS Audio are used for signal distribution and processing. The hybrid point-source / distributed loudspeaker design for the facility implements three huge clusters, positioned along the top of

the west end of the seating bowl, firing across the field to the other side. To provide a sense of scale, a set of 4 JBL Vertec 4889s are used as the near fill system. JBL Control Contractor series loudspeakers are used for distributed sound in ancillary zones and JBL custom speakers were designed for under-balcony. 178 CTs Series two-channel amplifiers fitted with IQ-PIP-USP3 modules power the entire stadium, ranging from the suites to the main clusters. The IQ-PIP-USP3 modules add an enormous amount of signal processing, control, and metering to the CTs amplifiers in addition to advanced error reporting and load monitoring capabilities.

Monster sound system installed at the new home of the "Monsters of the Midway"

The amplifiers were installed into seven different rack rooms with two dedicated to the clusters. A Fast Ethernet network was installed with Fiber optic cable for transporting the IQ Network communications between rack rooms and central control. Once the hardware was installed in the racks and the cable-plant was in place, making system connections was as simple as clicking a single RJ-45 connector into each component. This allowed the installation to

be completed in a short time, and with very little difficulty.

The Soldier Field IQ Network actively monitors the operation of the system, and detects potential problems before they have the opportunity to evolve into real ones. For instance, if a particular amplifier channel or loudspeaker driver starts to operate outside of a specified tolerance range, the computer will immediately display an error message alerting the tech staff of the anomaly. In providing an "early warning," potential problems can very likely be resolved prior to triggering customer complaints or, worse yet, catastrophic and costly damage to audio equipment. Bradford Benn, US Business Development Manager for Installed Sound at Crown commented about the IQ Network, "The fact that our IQ Network works on common Ethernet networking technology was a real benefit for this project. When it was time for SPL to do the installation, they didn't have to worry about a lot of special considerations to make the network function. Common networking design and practice is all that is required to get up and running."

I Q N E T W O R K



IQ-PIP LITE

SmartAmp Automation for TCP/IQ

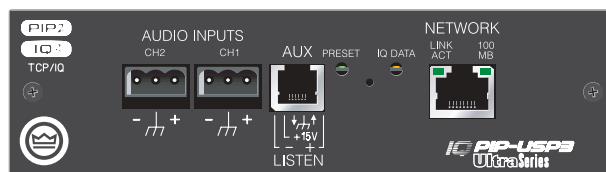


The Crown IQ-PIP LITE is a PIP (Programmable Input Processor) input module for PIP2 compatible amplifiers. The IQ-PIP-LITE is a TCP/IQ series component. This means it connects to an IQ Network via 100 Mb Ethernet. This provides faster IQ communications than the previous current loop, IQ bus, connectivity method. The audio path in the IQ-PIP LITE is processed totally in the analog domain. The SmartAmp™ feature set offers a range of automation functions which provide greater control over amplifier operation and helps to save both time and money.

} FEATURES

- An IQ Network™ Programmable Input Processor with TCP/IQ (connects to an IQ System via 100 Mb Ethernet).
- Remote control and monitoring of PIP2-compatible Crown amplifiers as well as some PIP1-compatible amplifiers.*
- Faster IQ communications than the IQ bus.
- Can be connected to the same network used to transmit CobraNet audio.
- Implements SmartAmp features: input compressors, multimode output limiters, error reporting and load monitoring.
- AUX connector configurable for AUX input, AUX output, or Listen Bus.

* Please refer to the module compatibility chart at the end of the System Solutions section.



IQ-PIP USP3

Digital Signal Processing for TCP/IQ



The Crown IQ-PIP USP3 is a 3rd generation DSP-based PIP (Programmable Input Processor) input module for PIP2 compatible amplifiers*. It connects the amplifier to a 100 Mb Ethernet network allowing it to be remotely controlled and monitored via IQ. This module is a TCP/IQ series component and connects to the audio control/monitor network using standard 100 Mb Ethernet hardware (switches, Network Interface Cards, and cables).

The USP3's SHARC DSP processor gives the user an enormous amount of digital signal processing. Audio routing, faders, meters, polarity & mute, input compressors, filters, delays, multimode output limiters, error reporting, and load monitoring are all available. A built-in noise generator and sine-wave generator provide noise masking and test capabilities. The enhanced AUX port capability allows the user to interface with the amplifier to provide external manual control and monitoring.

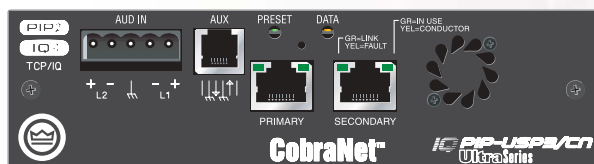
Offering crisp, clear sound and the widest dynamic range possible with full 24-bit converters, the IQ-PIP USP3 provides unprecedented power and flexibility in one compact—and very affordable—module.

} FEATURES

- 100 Mb Ethernet single-plug solution for TCP/IQ control and monitoring.
- Listen Bus amplifier output monitor (through CobraNet).
- 24-bit conversion with 32-bit, floating point DSP processing.
- 64 assignable filters with 9 different filter types including all-pass filters.
- Over 2 seconds of delay available per channel.
- Input compressors and output limiters for each channel.
- Dual, uncorrelated noise generators for noise masking.
- Sine-wave noise generator.
- Load supervision.
- Full error reporting.
- Firmware upgrades via the network.
- 10 user-selectable presets.
- Reliable FLASH memory backup of all parameters.

* Please refer to the module compatibility chart at the end of the System Solutions section.





IQ-PIP USP3/CN

SmartAmp Automation for TCP/IQ



The Crown IQ-PIP USP3/CN is a 3rd generation DSP-based PIP™ (Programmable Input Processor) input module for PIP2 compatible amplifiers*. It connects the amplifier to a 100 Mb Ethernet network allowing it to be remotely controlled and monitored via IQ. In addition, the USP3/CN allows the transport of real-time digital audio via CobraNet over the same Ethernet network.

The USP3/CN is a TCP/IQ series component and connects to the audio control/monitor network using standard 100 Mb Ethernet hardware (switches, Network Interface Cards, and cables). CobraNet audio is available over the same 100 Mb Ethernet network, providing a simple to install, single plug solution for audio distribution, control, and monitoring.

The USP3/CN's SHARC DSP processor gives the user an enormous amount of digital signal processing. Audio routing, faders, meters, polarity & mute, input compressors, filters, delays, multimode output limiters, error reporting, and load monitoring are all available. A built-in noise generator and sine-wave generator provide noise masking and test capabilities. The enhanced AUX port capability allows the user to interface with the amplifier to provide external manual control and monitoring.

FEATURES

- 100 Mb Ethernet single-plug solution for both CobraNet audio and TCP/IQ control and monitoring.
- Analog audio inputs allow audio input to the CobraNet network, CobraNet audio redundancy, or a hardwire emergency override of CobraNet audio.
- "Listen Bus" amplifier output monitor via CobraNet.
- 24 bit digital to analog conversion with 32 bit, floating point DSP processing.
- 64 assignable filters with 9 different filter types including all-pass filters.
- Over 2 seconds of delay available per channel.
- Input compressors and output limiters for each channel.
- Dual, uncorrelated noise generators for noise masking.
- Sine-wave generator.
- Load supervision.
- Full error reporting.
- Firmware upgrades via the network.
- 10 user selectable presets.
- Reliable FLASH memory backup of all parameters.

* Please refer to the module compatibility chart at the end of the System Solutions section.

IQ NETWORK

I-Tech & IQ

"A marriage made in Audio Heaven"

GRAMMY Award-winning recording artist Nelly Furtado recently completed her two-week "Come As You Are" Canadian tour in support of her second release entitled "Folklore." The first date of the tour was at the 12,000-seat Molson Amphitheater in Toronto. The show featured a seven-piece band, supporting Nelly's intriguing blend of rock, acoustic and hip-hop sounds with a Brazilian influence. The main touring system was augmented for the first show, and then was paired down for the remainder of the "soft-seater" dates in major market areas throughout Canada. Crown recently caught up with Mark Radu, Systems Engineer for PA+ Productions, a major touring company located in Toronto who provided the system for the Nelly tour. Mark discussed his experience with their new I-Tech Series amplifiers.

"I hadn't had much prior experience with the Crown IQ Network but was familiar with other digital based processors. I received a couple of Crown I-Techs to demo and was immediately impressed with the amplifier's sonic performance. DSP engine aside, it was probably the best amplifier I had heard. After putting the amplifier through some rigorous testing I was continually impressed with its construction and performance. After exploring the DSP aspect of the amplifier, I was totally blown away with the capabilities the I-Tech amplifiers possessed. The DSP provided a limitless number of possibilities not



Nelly Furtado tours with I-Tech.

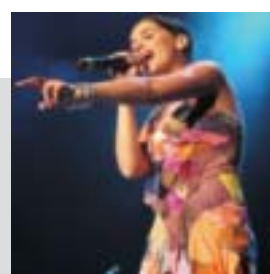
only within the realm of speaker processing but in overall system control as well.

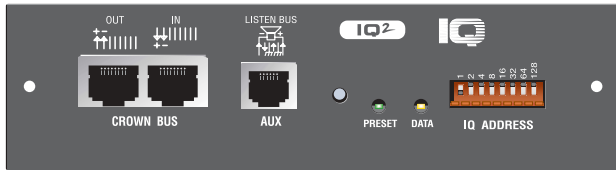
"The House PA system was controlled by a single notebook computer hardwired to the drive system, amplifiers and JBL SMAART. A remote wireless display panel allowed me to walk the entire venue with system control and SMAART at my fingertips. The entire monitor system was also programmed using Crown IQ. The system was stand-alone plug and play: power the I-Techs on, plug in a speaker and go. Out of 248 bands of graphic EQ on the entire monitor rig, I counted a total of 12 filters in use at tour's end.

"Using an array of custom-built control pages dedicated to the tour's speaker compliment and configuration I was able to have all the pertinent parameters readily available and configured while keeping all non-relevant control elements in the background. The flexibility and sheer amount of overall DSP horsepower within the IQwic program is nothing short of mind-boggling. Having control over and being able to matrix every single

component within the entire speaker system not only allowed for a quick acoustic setup but allowed me to finesse and massage the (JBL Professional) VERTEC line array elements like never before. Getting the rig to sound the same each night in every venue was easier than ever. Nelly's music is very busy with a total of 54 Inputs from stage. Finding a spot for everything in the mix turned out to be less of a challenge than I thought it would be. Also, I cannot say enough about the true voltage limiting on the I-Tech amplifiers. Knowing your system is protected that well on tour is truly one less thing worry about.

"In short, the Crown I-Tech is probably the best amplifier I've heard. It has unmatched damping in the low end, rich, full sounding mids and crystal clear high-end definition. Couple this with the sheer DSP horsepower and the flexibility of the IQwic software and you have a marriage made in Audio Heaven."





IQ-MC8 module. IQ-MC4 module not shown.

IQ-MC4 & IQ-MC8

SmartAmp Automation for CTs Multichannel Amplifiers

The Crown IQ-MC4 and IQ-MC8 are optional IQ control modules for the Crown CTs multichannel power amplifiers. The IQ-MC4 is the IQ module for the CTs 4200, and the IQ-MC8 is the IQ module for the CTs 8200. The modules require an IQ System with an IQ2-compatible interface.

A single IQ-MC module provides IQ control and monitoring capability to all channels of the amplifier. Features include basic IQ amplifier control and monitoring, including attenuation, mute, polarity, input level, output level, power supply temperature, and thermal level meters. Advanced features include IOC, Thermal and Fault error reporting, Load Supervision, output limiting, Listen Bus, AUX control port, 10 presets, and real-time “read-only” software indication of amplifier hardware indicator, level control, and mode switch status.

Crown CTs 4200 and 8200 amplifiers can be supplied with an IQ-MC module already factory-installed, or your choice of MC modules can be easily added to the amplifier by any authorized Crown Service Center.

} FEATURES

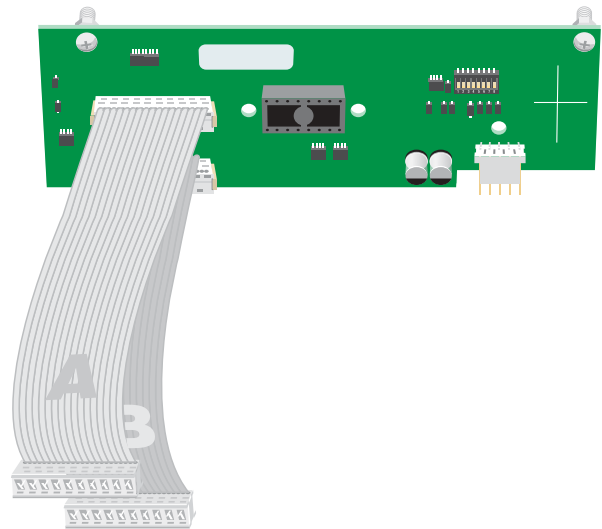
Basic Features

Basic IQ amplifier control and monitoring, including:

- Attenuation.
- Mute.
- Polarity.
- Input level.
- Output level.
- Power supply temperature.
- Thermal level.

Advanced Features

- IOC.
- Thermal and Fault error reporting.
- Load Supervision.
- Output limiting.
- Listen Bus.
- AUX control port.
- 10 presets.
- Real-time “read-only” software indication of amplifier hardware indicator, level control, and mode switch status.
- Error reporting for level control or mode switch position change.



IQ-PIP-USB2 Adapter

For Older PIP-Compatible Amplifiers

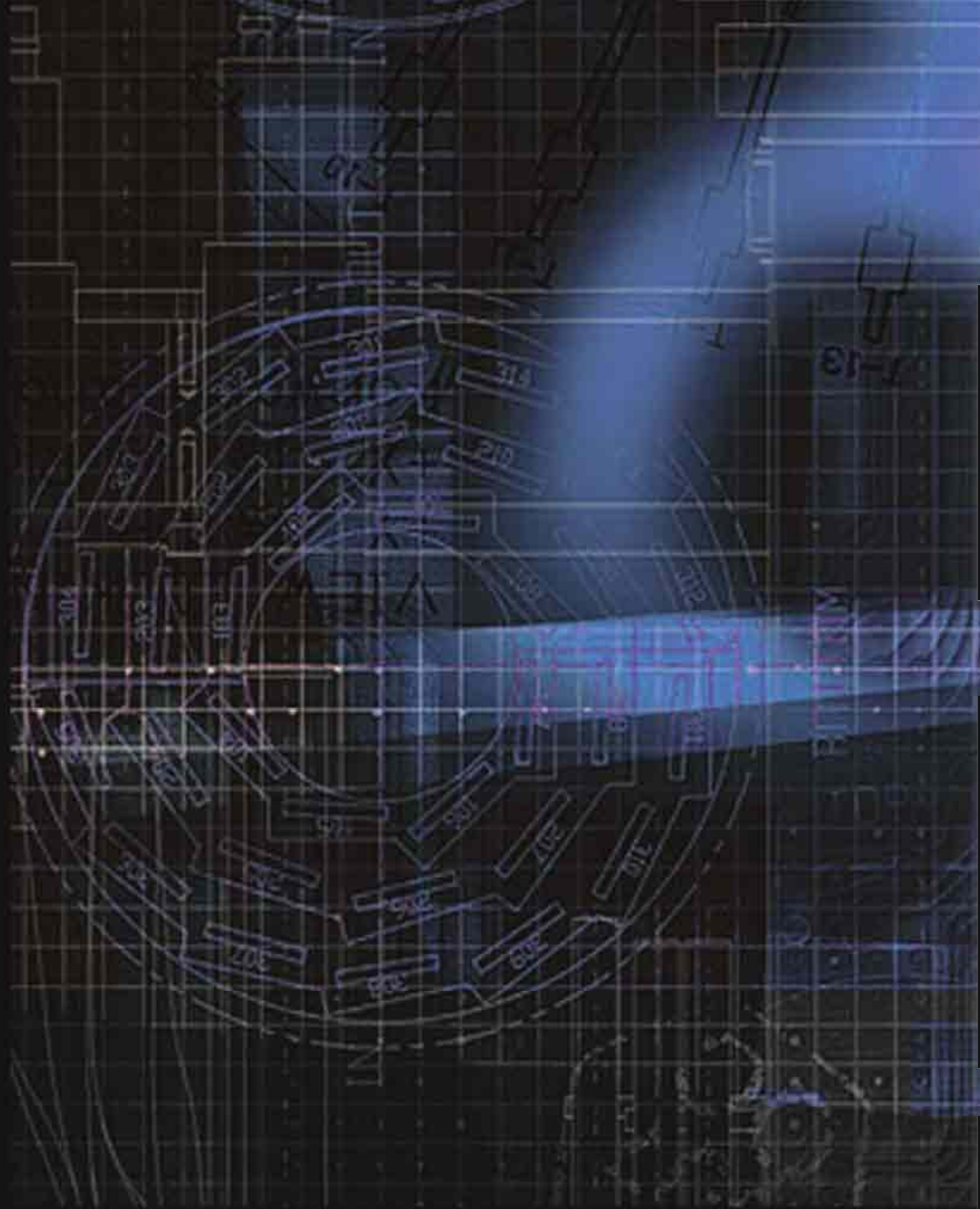
The IQ-PIP USB2 Adapter allows many older Crown PIP compatible amplifiers (i.e. Macro-Tech, Com-Tech, and Studio Reference Series) to access the power and versatility of the Crown IQ-PIP-LITE module.

The USB2 Adapter can be installed into the following amplifier models: CT-200, CT-400, CT-800, CT-1600, MA-600, MA-1200, MA-2400, MA-3600VZ, MA-5000VZ, MA-24x6, MA-36x12, Studio Reference I, Studio Reference II.

Qualified service personnel must install the IQ-PIP USB2 Adapter. Installation procedures may vary depending upon the amplifier model. Contact your Crown dealer or the Crown Technical Support Group for details.



IQ NETWORK





AMPLIFIER ACCESSORIES

PIP Modules

CTs Multi-Channel Amp Accessories

SST Input Modules

CE Output Modules

Other Amplifier Accessories

Module Compatibility

PIP-3632, PIP-4622, PIP-4632, PIP-USL**For use with JBL ScreenArray Cinema Speaker System**

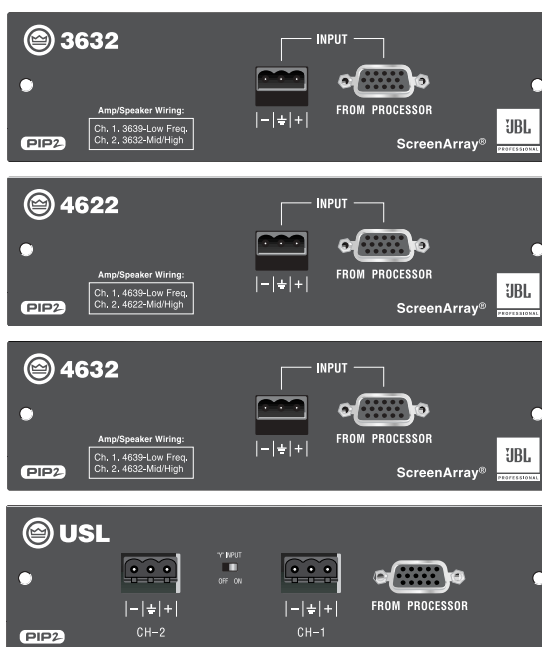
Crown ScreenArray PIP modules are custom two-channel crossover networks with equalization specifically designed for use with JBL® ScreenArray® cinema speaker systems installed in cinemas, studio production and post-production environments.

The PIP-4622 is designed for use with the model 4622 ScreenArray system, the PIP-3632 is designed for use with the model 3632 ScreenArray system, and the PIP-4632 is designed for use with the model 4632 ScreenArray system.

The PIP-USL module is designed to integrate Crown amplifiers into audio systems installed in cinemas, studio production and post-production environments.

The ScreenArray PIP modules and PIP-USL install into the back of Crown PIP2-compatible amplifiers, saving rack space and simplifying system wiring. You must have a PIP2-compatible amplifier to use the ScreenArray PIP modules. To determine if your amplifier is PIP2-compatible, look for the **PIP2** logo on the back of the amplifier or refer to the compatibility chart at the end of the System Solutions section.

The HD15 connector provided on all of these PIP modules is designed for quick and easy interface with popular cinema monitor products such as the USL CM-680. Accepts signal for surround or subwoofer channels, or bi-amp signals for screen channels, from the cinema processor.

**P.I.P.®-AMCb, P.I.P.-CLP, P.I.P.-EDCb, P.I.P.-RPA, P.I.P.-RPTA**

P.I.P.®-AMCb. Provides both a variable 4th-order Linkwitz-Riley crossover and an IOC-driven or variable-threshold signal-driven compressor. In addition, variable equalization networks provide for “constant-directivity” horn equalization and filter-assisted B6 vented bass box equalization. Bi-amping and tri-amping capabilities are provided via XLR connectors.

P.I.P.-CLP. Is designed to detect and prevent overload. The same error detecting circuit that is used to signal the IOC indicator is used to activate this error-driven compressor. It is not a typical signal-driven compressor but a circuit to prevent an overload. It can yield up to 13 dB of additional signal safety margin without noticeable program change.

P.I.P.-EDCb. State-of-the-art programmable error-driven and signal-driven compressor plus a variable high-pass filter for each channel. Fast or slow attack and release times can be set independently for each channel.

P.I.P.-RPA. A phantom-powered mixer that has four balanced mic or line inputs with voiceover capability, adjustable “duck” level, and 84 dB of attenuation. A 10-volt DC source for remote control capability is provided. The PIP-EXT (Part M44731-4), available from service, allows the PIP-RPA and other PIP cards to be “extended” outside the amplifier for easy set up.

P.I.P.-RPTA. This module has the same features as the P.I.P.-RPA but includes four input transformers.

Regulatory Certifications

For all PIP and P.I.P. modules



Crown PIP™ (programmable input processor) modules open up a completely new realm of capability for Macro-Tech and Studio Reference amplifiers. Simply plug into the rear-mounted PIP connector of these amplifiers. They provide a cost-effective, convenient alternative to out-board processors or inferior systems that can compromise performance. A wide assortment of PIP modules are available.

VCA-MC4A & VCA-MC8

Remote Level Control

The Crown VCA-MC4A and VCA-MC8 are optional level-control modules for the Crown CTs multi-channel power amplifiers. The VCA-MC4A is for the CTs 4200, and the VCA-MC8 is for the CTs 8200.

A VCA-MC module provides independent remote level control for each channel. 4-pin removable Phoenix-style barrier connectors provide the +10VDC control voltage, ground, and control lines for two amplifier channels. Thus, the 4-channel CTs 4200 uses two connectors; the 8-channel CTs 8200 uses four connectors. Crown CTs 4200 and 8200 amplifiers can be supplied with a VCA-MC module already factory-installed, or your choice of MC modules can be easily added to the amplifier by any authorized Crown Service Center.

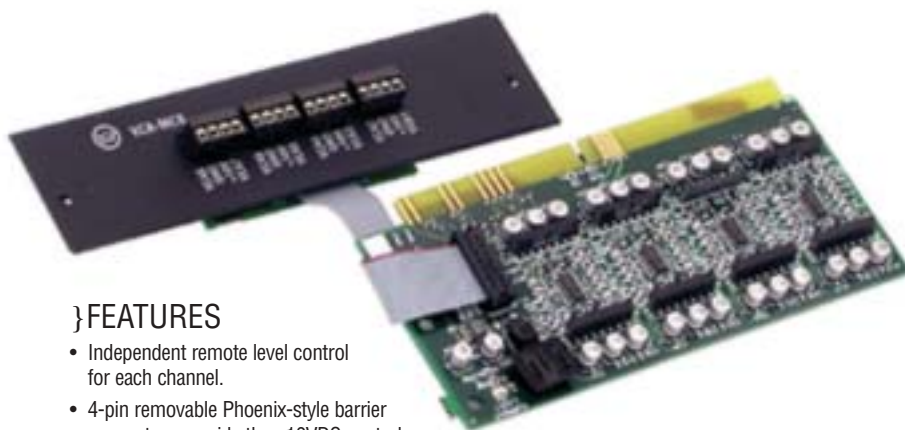
Choosing the Right Module

To order accessory modules for your amplifier, please refer to the model tag (located on the back panel of the amplifier) for your amplifier's specific model number. Then refer to the information below to select the correct accessory for your requirements.

CTs 4200: VCA-MC4 or IQ-MC4

CTs 4200A: VCA-MC4A or IQ-MC4A

CTs 8200 or CTs 8200A: VCA-MC8 or IQ-MC8



} FEATURES

- Independent remote level control for each channel.
- 4-pin removable Phoenix-style barrier connectors provide the +10VDC control voltage, ground, and control lines for two amplifier channels.
- Optional wall-mount level control panels for use with VCA modules: 1-VCAP and 4-VCAP.

CTs Controllers

1-VCAP & 4-VCAP

Wall-Mount Controllers

Crown VCAP panels are wall-mounted panels with potentiometers that provide remote control of the volume of Crown CTs amplifier channels via a VCA-MC4 or VCA-MC8 module installed in the amplifier. Two models are available: 1-VCAP and 4-VCAP.

1-VCAP: Used in conjunction with a VCA-MC module, this is a 1-gang panel with one potentiometer that provides remote volume control for one or more CTs amplifier channels. The potentiometer on the panel is wired directly to the VCA connectors on the VCA-MC.

4-VCAP: This is a 2-gang panel with four potentiometers that provide remote volume control for four or more CTs amplifier channels. The potentiometers on the panel are wired directly to the VCA connectors on the VCA-MC.



} FEATURES

- 1-VCAP provides remote volume control for one or more CTs amplifier channels.
- Fits into a 1-gang electrical box.
- 4-VCAP provides remote volume control for four or more CTs amplifier channels.
- Fits into a 2-gang electrical box.

Regulatory Certifications

For all CTs Multi-Channel Amp Accessories



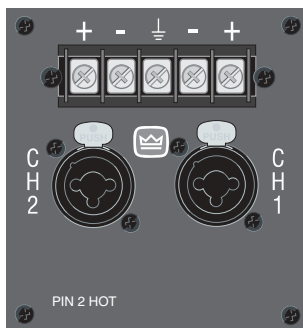
ACCESSORIES



Cheeseburger in Paradise,
Indianapolis, IN, U.S.A.

ACCESSORIES } SST INPUT MODULE

Input Options for CE, CH and CL Amplifiers



Basic Input Module Standard

SST module on Contractor Series and CE Series amplifiers. Barrier, XLR and TRS balanced input connectors.



SST-SBSC

2-way stereo crossover with summed bass output.

SST-SBSC 3632T: Configured for use with JBL model 3632T ScreenArray cinema speaker systems.

SST-SBSC 4632T: Configured for use with JBL model 4632T ScreenArray cinema speaker systems.

SST-SBSC JBL4675: Configured for use with JBL model 4675 cinema speaker.

SST-SBSC JBL5672: Configured for use with JBL model 5672 cinema speaker.



SST-4622 custom two-channel crossover network with routing and equalization specifically designed for use with JBL model 4622 ScreenArray cinema speaker systems.



SST-4632 Custom two-channel crossover network with routing, equalization and delay specifically designed for use with JBL model 4632 ScreenArray cinema speaker systems.



SST-3632 Custom two-channel crossover network with routing, equalization and delay specifically designed for use with JBL model 3632 ScreenArray cinema speaker systems.



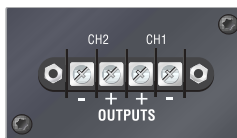
SF Theaters, Bangkok, Thailand.





CE Outputs

For the CE 1000, CE 2000 and CE 2000TX only.



CEAS1 Provides barrier output connection in addition to the Neutrik Speakon output connection. Also includes a touch-safe connector cover.



CEAS2 Provides 5-way output connection in addition to the Neutrik Speakon output connection for CE 1000, CE 2000 and CE 2000TX amplifiers.

For the CE 4000 only.

CE4D Provides Neutrik Speakon and 5-way binding post output connections for CE 4000 amplifiers.



Versatile SST input modules for Crown CE, CH and CL amplifiers extend your amplifier's capabilities quickly and easily. Modules provide common crossover filters or custom filters designed to work with JBL ScreenArray speakers. CE output option modules provide alternate output connectors to customize your CE amplifier to fit your system requirements.

ACCESSORIES



TP-170V. Constant-Voltage Transformer Panel

The Crown® **TP-170V** is a rack-mountable panel with four autoformers to provide impedance matching between amplifier outputs and “constant voltage” loudspeakers. This unit allows amplifiers without direct 70V or 100V output capability to drive distributed speaker systems designed to operate at those voltages. The TP-170V is constructed of sturdy steel, and hinged on one side to allow easy access to the inside connections.

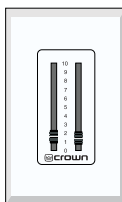


Pittwater Church. Sydney, Australia.



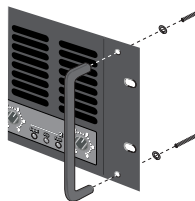
T-170V. Constant-Voltage Transformer

The Crown **T-170V** is a single autoformer that provides impedance matching between an amplifier output and “constant voltage” loudspeakers. It allows amplifiers without direct 70V or 100V output capability to drive distributed speaker systems designed to operate at those voltages.



RPA-RMT. Remote Wall Panel

The Crown **RPA-RMT** is a remote wall panel designed to work with the PIP-RPA. It features two level controls and a remote “tie” module that allows the attenuation of each input channel.



CE-HANDLES. CE Amplifier Handles Kit

CE handles complement your amplifier’s appearance, aid in transportation, and help you place the amplifier in or remove it from racks. For all CE, CH and CL Series amplifiers.



SPEAKONS. Connector Kit

Neutrik Speakon NL-4F output connector kit.

Accessories

cya
(cover your amp)

3PLUS3. 3+3 Extended Warranty

Crown’s No-Fault, **3+3 Extended Warranty** package extends the terms of your original full warranty for an additional three years, thus covering years four through six. Available for Crown amplifiers only.

X = Compatible

AMPLIFIER	ANALOG PIPS 4	SST MODULES	CEAS1, CEAS2	CE4C, D, E	IQ-PIP-LITE	IQ-PIP- USP3	IQ-PIP- USP3/CN	IQ-MC4A, VCA-MC4A	IQ-MC8, VCA-MC8	MT-XLR MT-BB	SCREEN ARRAY PIPS	IQ-PIP- USP2 Adapter
CTs 600/ 1200/2000/ 3000					X	X	X				X	
CTs 4200								X				
CTs 8200									X			
MA02 Series	X				X	X	X				X	
MA 3600VZ	X				1							X
MA 5000VZ	X				2	2	2				X	X
MA 5002VZ	X				X	X	X				X	
MA 24x6	X				1							X
MA 36X12	X				1							X
MT Series										X		
Studio Ref. 1 and 2	X				1							X
CT 210	X				X	X	3				X	
CT 410/ 810/1610	X				X	X	X				X	
MA 00 Series	X				1							X
CT 00 Series	X				1							X
CE1000/ 2000/TX		X	X									
CE 4000		X		X								
CH Series		X										
CL Series		X										
D, IT, K, XLS and Xs Series												

- 1 IQ-PIP Lite may be installed in older PIP1-compatible amplifiers by using the USP2 Adapter Kit (functionality slightly limited when using the Adapter Kit).
- 2 MA-5000VZ amplifiers with serial numbers beginning with the prefix A or B are PIP2 compatible. PIP2 compatible amplifiers bear the PIP2 logo  on the rear.
- 3 CT-210 must have optional fan installed.
- 4 Analog PIPs include: P.I.P.-AMCb, P.I.P.-CLP, P.I.P.-EDCb, P.I.P.-RPA and P.I.P.-RPAT.

ACCESSORIES



REFERENCE

[Amplifier Features Comparison Chart](#)

[Amplifier Specifications](#)

[Warranties and Trademarks](#)

REFERENCE } AMPLIFIER FEATURE COMPARISON CHART

	CE 1K/2K	CE 4000	CH 1, CH 2	CH 4	CL 1, CL 2	CL 4	K Series	Studio Ref	MA-602,1202,2402
Protection systems									
ODEP/JTS								X	X
Thermal Level Control (TLC)							X		
Automatic high-pass filter			X	X			X		
Switchable high-pass filter		X							
Low-pass filter (ultrasonic/RFI protection)	X	X	X	X	X	X	X		
Power circuit breaker	X		X	X	X	X		X	2402 only
Proportional-speed fans	X	X	X	X	X	X		X	
Automatic current and voltage limiting		X							
Quad Mute									X
Convection cooled (no fan)							X		
Advanced Features									
Class I (BCA)		X		X		X	X		
Switching power supply		X		X		X			
Grounded Bridge								X	X
AB+B	X		X		X				
Bridge Mode Indicator									
Y input switch							X		
Input Sensitivity switch	X	X					X	X	X
IOC							X	X	X
Standby mode								X	X
Precision detented level controls			X	X	X	X			
70V / 100V operation			X	X					
Options									
Input sensitivity option			X	X	X	X			
Handle kit	X	X	X	X	X	X			
Input modules	X	X							
Output modules	X	X							
Level Control shaft lock									X
PIP compatible								X	X
PIP2 compatible									X
Crown SST Modules	X	X	X	X	X	X			
Other (specify)									
Input									
XLR							X	X	X
1/4-inch							X	X	X
Combo	X	X	X	X	X	X			
Screw terminals	X	optional	X	X	X	X			
Output									
Speakon	X	X							
5-way binding posts	optional	X					X	X	X
Screw terminals			X	X	X	X			



	MA3600VZ, MA5002VZ	MA 24x6, 36x12	MT	CTs 2-Ch.	CTs multi-ch.	D	CP660	XLS	Xs	I-Tech
Protection systems										
ODEP/UTS	X	X	X	600/1200 only	X					X
Thermal Level Control (TLC)				X	X					
Automatic high-pass filter					X					
Switchable high-pass filter				X						
Low-pass filter (ultrasonic/RFI protection)			X	X						
Power circuit breaker	MA5002VZ only	X	2400 only	X				X	X	X
Proportional-speed fans	X			X	X		X			X
Automatic current and voltage limiting						X		X	current	
Quad Mute										
Convection cooled (no fan)						X				
Advanced Features										
Class I (BCA)				2000/3000 only						X
Switching power supply				X	X				X	X
Grounded Bridge	X	X	X							
AB+B				600/1200 only	X	X	X	X		
Bridge Mode Indicator				X	X				X	X
Y input switch										X
Input Sensitivity switch	X	X	X	X						X
IOC	X	X				X				
Standby mode				2000/3000 only						
Precision detented level controls				X	X			X	X	X
Other (specify)	7				2	headphone jack			5	9
Options										
Input sensitivity switch					X					X
Handle kit										
Input modules			X							
Output modules										
Level Control shaft lock										
PIP compatible	X	X								
PIP2 compatible	X			X						
Crown SST Modules										
Other (specify)				1	3	4				
Input										
XLR	X	X	optional					X		X
1/4-inch	X	X	X							
Combo						X			X 6	
Screw terminals				X	X		X			
Phoenix									X	
Output										
Speakon								X		X
5-way binding posts	MA3600VZ only	X	X				X	X	X	X
Screw terminals	8			X	X	X				
Other (specify)										10

- 1 T-170V autoformer, TP-170V autoformer panel optional accessories
2 Fault Isolation Topology, Hi/low Z output mode switch
3 MC modules and VCA modules option allow remote volume control
4 Bridge-mono option, input-sensitivity option
5 Microprocessor-controlled protection, AC Mains indicator
6 XLR output paralleled with XLR-1/4" combo and Phoenix-style inputs
7 Both have Variable Impedance (VZ); MA5002VZ has compressor
8 MA5002VZ has screw terminals and banana jacks
9 Onboard IQ networking via TCP/IQ or CobraNet, AES/EBU digital input, onboard DSP, pushbutton presets, global power supply with PFC, LCD control screen shows status/diagnostics
10 Two male XLR passive analog loop through. XLR active/re-clocked AES/EBU digital loop through.

REFERENCE

REFERENCE } AMPLIFIER SPECIFICATIONS

Amplifiers	Dual Power Per Channel ¹	Mono Power ²	Dimensions ³	Weight	Comments
CE 1000	560W-2 Ω , 450W-4 Ω , 275W-8 Ω	1,100W-4 Ω , 900W-8 Ω	19 x 5.25 x 13"	32 lbs. 6 oz.	AB+B circuitry; Signal, Fault, Clip indicators; Stereo and Bridge-Mono modes; Neutrik Combo and barrier block input connectors; Neutrik NL4 Speakon output connectors; auxiliary fault jack; front panel level controls; proportional-speed fan; SST compatible
CE 2000	975W-2 Ω , 660W-4 Ω , 400W-8 Ω	1,950W-4 Ω , 1,320W-8 Ω	19 x 5.25 x 13"	40 lbs. 3 oz.	
CE 2000TX	660W-4 Ω , 400W-8 Ω	1,320W-8 Ω	19 x 5.25 x 13"	40 lbs. 3 oz.	
CE 4000	1,400W-2 Ω *, 1,200W-4 Ω , 600W-8 Ω	2,800W-4 Ω *, 2,400W-8 Ω	19 x 5.25 x 16.25"	33 lbs. 3 oz.	High power, high efficiency; global power compatibility; less heat and lighter weight; modular input/output modules; selectable LPF & HPF per channel; SST compatible
CH1	450W-4 Ω , 275W-8 Ω , 300W-70V, 300W-100V	900W-8 Ω , 600W-140V, 600W-200V	19 x 5.25 x 12.25"	40 lbs. 10 oz.	
CH2	660W-4 Ω , 400W-8 Ω , 600W-70V, 600W-100V	1,320W-8 Ω , 1,200W-140V, 1,200W-200V	19 x 5.25 x 12.25"	48 lbs. 5 oz.	
CH4	1,200W-4 Ω , 600W-8 Ω , 1,200W-70V	2,400W-8 Ω , 2,400W-140V	19 x 5.25 x 16.25"	33 lbs. 5 oz.	4/8W, 70V or 100V output options per channel; 70 Hz HPF for constant-voltage outputs; rear-panel precision detented level controls; SST compatible
CL1	560W-2 Ω , 450W-4 Ω , 275W-8 Ω	1,100W-4 Ω , 900W-8 Ω	19 x 5.25 x 12.25"	32 lbs. 10 oz.	
CL2	975W-2 Ω , 660W-4 Ω , 400W-8 Ω	1,950W-4 Ω , 1,320W-8 Ω	19 x 5.25 x 16.25"	40 lbs. 5 oz.	
CL4	1,400W-2 Ω *, 1,200W-4 Ω , 600W-8 Ω	2,800W-4 Ω *, 2,400W-8 Ω	19 x 5.25 x 16.25"	33 lbs. 5 oz.	High power 2W operation; shallow chassis; SST compatible
CTs 600	150W-2 Ω , 300W-4 Ω , 300W-8 Ω , 300W-16V, 3,00W-70V	300W-4 Ω , 600W-8 Ω , 600W-16 Ω , 600W-140V	19 x 3.5 x 14.25"	22 lb. 13 oz.	
CTs 1200	250W-2 Ω , 600W-4 Ω , 600W-8 Ω , 300W-16 Ω , 600W-70V	500W-4 Ω , 1200W-8 Ω , 1200W-16 Ω , 1200W-140V	19 x 3.5 x 14.25"	23 lb. 6 oz.	Switching power supply; high power density; direct constant-voltage operation; independently selectable input sensitivity per channel; JTS protects output transistors in CTs 600/1200; AB&B topology in CTs 600/1200; Class I (BCA) topology in CTs 2000/3000; PIP compatible
CTs 2000	1,000W-2 Ω , 1,000W-4 Ω , 1,000W-8 Ω , 625W-16 Ω , 1,000W-70V, 1,000W-100V	2,000W-4 Ω , 2,000W-8 Ω , 2,000W-16 Ω , 2,000W-140V, 2,000W-200V	19 x 3.5 x 14.25"	27 lb.	
CTs 3000	1,500W-2 Ω , 1,500W-4 Ω , 1,250W-8 Ω , 625W-16 Ω , 1,500W-70V, 1,500W-100V	3,000W-4 Ω , 3,000W-8 Ω , 2,500W-16 Ω , 3,000W-100V, 3,000W-200V	19 x 3.5 x 14.25"	27 lb. 11 oz.	
CTs 4200	260W-4 Ω , 200W-8 Ω , 220W-70V	520W-8 Ω , 400W-16 Ω , 220W-100V	19 x 3.5 x 16.25"	27 lb. 8 oz.	Multichannel amps; switching power supply; JTS protects output transistors; high power density; constant voltage or low Z for each ch. pair; Fault Isolation Topology isolates faults; MC modules for remote control
CTs 8200	200W-4 Ω , 160W-8 Ω , 200W-70V	400W-8 Ω , 320W-16 Ω , 200W-100V	19 x 5.25 x 16.25"	36 lb. 6 oz.	
K1	750W-2 Ω , 550W-4 Ω , 350W-8 Ω	1,500W-4 Ω , 1,100W-8 Ω	19 x 3.5 x 16"	32 lbs.	
K2	1,250W-2 Ω , 800W-4 Ω , 500W-8 Ω	2,500W-4 Ω , 1,600W-8 Ω	19 x 3.5 x 16"	38 lbs.	Balanced Current Amplifier (BCA, Class I) circuitry; TLC, Clip, IOC, Signal indicators; Dual and Bridge-Mono modes; 1/4-in. TRS and XLR input connectors; "Y" input, selectable; front panel level controls; ground lift switch, convection cooling
MA-602	400W-2 Ω , 325W-4 Ω , 220W-8 Ω	750W-4 Ω , 655W-8 Ω	19 x 3.5 x 16"	39 lbs. 9 oz.	
MA-1202	675W-2 Ω , 480W-4 Ω , 310W-8 Ω	1,300W-4 Ω , 970W-8 Ω	19 x 3.5 x 16"	44 lbs. 1oz.	
MA-2402	1,050W-2 Ω , 800W-4 Ω , 520W-8 Ω	2,070W-4 Ω , 1,585W-8 Ω	19 x 3.5 x 16"	51 lbs. 12 oz.	Grounded Bridge circuitry; ODEP, IOC/SPI indicators; separate power supplies; Dual, Bridge-Mono and Parallel-Mono modes; balanced XLR input connectors; front-panel level controls; ground lift switch; forced-air cooling; PIP compatible
MA-24X6	See MA-2402/MA-602	NA	19 x 3.5 x 16"	45 lbs. 2 oz.	
MA-36X12	See MA-3600VZ/MA-1202	NA	19 x 3.5 x 16"	50 lbs. 12 oz.	
MA-3600VZ	1,800W-2 Ω , 1,565W-4 Ω , 1,120W-8 Ω	3,505W-4 Ω , 3,140W-8 Ω	19 x 3.5 x 16"	55 lbs. 4 oz.	3-mode VZ power supply for maximum power matching; includes all MA Series features
MA-5002VZ	2,500W-2 Ω , 2,000W-4 Ω , 1,300W-8 Ω	5,000W-4 Ω , 4,000W-8 Ω	19 x 5.25 x 16"	77 lbs. 13 oz.	
MT-600	400W-2 Ω , 325W-4 Ω , 220W-8 Ω	750W-4 Ω , 655W-8 Ω	19 x 3.5 x 16"	36 lbs. 4 oz.	
MT-1200	675W-2 Ω , 480W-4 Ω , 310W-8 Ω	1,300W-4 Ω , 970W-8 Ω	19 x 3.5 x 16"	41 lbs. 1 oz.	Grounded Bridge circuitry; Enable, ODEP indicators; dual power supplies; Dual, Bridge-Mono and Parallel-Mono modes; three input sensitivities; ground lift switch; forced-air cooling
MT-2400	1,050W-2 Ω , 800W-4 Ω , 520W-8 Ω	2,070W-4 Ω , 1,585W-8 Ω	19 x 3.5 x 16"	46 lbs. 14 oz.	
XLS 202	250W-2 Ω , 200W-4 Ω , 145W-8 Ω	500W-4 Ω , 400W-8 Ω	19 x 3.5 x 14"	21 lbs.	
XLS 402	570W-2 Ω , 400W-4 Ω , 260W-8 Ω	1,140W-4 Ω , 800W-8 Ω	19 x 3.5 x 14"	25 lbs. 5 oz.	Rugged all-steel 2U chassis; efficient cooling fan; electronically balanced XLR inputs; touch-proof binding post and Speakon® outputs; precision detented level controls; clip/power/fault indicator LEDs
XLS 602	840W-2 Ω , 600W-4 Ω , 370W-8 Ω	1,680W-4 Ω , 1,200W-8 Ω	19 x 3.5 x 14"	27 lbs. 3 oz.	
Xs500	750W-2 Ω **, 500W-4 Ω , 400W-8 Ω	1,600W-4 Ω **, 1,450W-8 Ω	19 x 3.5x17"	28 lbs.	
Xs700	900W-2 Ω **, 750W-4 Ω , 450W-8 Ω	1,900W-4 Ω **, 1,645W-8 Ω	19 x 3.5x17"	28 lbs.	Rugged all-steel 2U chassis; efficient cooling fan; XLR-1/4" combo and Phoenix-style inputs; daisy-chain XLR outputs; binding post outputs and Speakon outputs in Xs500/700/900/1200; XLR-1/4" combo inputs and binding post outputs in Xs4300; precision detented level controls; LEDs for clip, power, AC present, temperature and fault conditions; microprocessor-controlled protection system; lightweight design; Xs4300 is 4-channel model
Xs900	1,100W-2 Ω **, 900W-4 Ω , 600W-8 Ω	2,500W-4 Ω **, 2,100W-8 Ω	19 x 3.5x17"	28 lbs.	
Xs1200	1,600W-2 Ω , 1,100W-4 Ω , 650W-8 Ω	2,000W-4 Ω , 2,300W-8 Ω	19 x 3.5 x 17"	28 lbs.	
Xs4300	300W-4 Ω , 200W-8 Ω	700W-8 Ω	19 x 3.5x17"	28 lbs.	AB+B circuitry; Power/Signal/IOC indicators, headphone jack; Dual/Bridge-Mono; Neutrik combo input connectors; detented front level controls, convection cooling
D-45	35W-4 Ω , 25W-8 Ω	70W-8 Ω	19 x 1.75 x 9"	8 lbs.	
D-75A	55W-4 Ω , 40W-8 Ω	110W-8 Ω	19 x 1.75 x 9"	9 lbs.	
CP660	75W-4 Ω , 60W-8 Ω ⁴	150W each-8 Ω ⁵	19 x 3.5 x 12.75"	25 lbs.	Six channels; push-pull circuitry; Signal, Clip, Temp, Power indicators; individual channel volume controls; Dual/Mono channel combining switch; proportional-speed on-demand fan
Studio Ref I	1,190W-4 Ω , 800W-8 Ω	2,375W-8 Ω	19 x 7 x 16"	60 lbs. 11 oz.	Grounded Bridge circuitry; dynamic range/level meters; Dual, Bridge-Mono and Parallel-Mono modes, 20-bit digital capable, damping factor in excess of 20,000
Studio Ref II	565W-4 Ω , 360W-8 Ω	1,145W-8 Ω	19 x 7 x 16"	56 lbs. 2 oz.	
I-T4000	1,800W-2 Ω , 2,000W-4 Ω , 1,240W-8 Ω	3,600W-4 Ω , 4,000W-8 Ω	19 x 3.5 x 16"	28 lbs.	
I-T6000	2,500W-2 Ω , 3,000W-4 Ω , 1,500W-8 Ω	5,000W-4 Ω , 6,000W-8 Ω	19 x 3.5 x 16"	28 lbs.	Amazing power in a 2U lightweight chassis, global power supply with PFC, onboard DSP, built-in networking to IQ System via TCP/IP or CobraNet™, LCD control screen shows amplifier status and diagnostics, pushbutton DSP presets for various loudspeakers, efficient Class-I circuitry
I-T8000	3,500W-2 Ω , 4,000W-4 Ω , 2,100W-8 Ω	7,000W-4 Ω , 8,000W-8 Ω	19 x 3.5 x 16"	28 lbs.	



Crown Amplifier Warranty

USA AND CANADA

SUMMARY OF WARRANTY

Crown International, 1718 West Mishawaka Road, Elkhart, Indiana 46517-4095 U.S.A. warrants to you, the ORIGINAL PURCHASER and ANY SUBSEQUENT OWNER of each NEW Crown product, for a period of three (3) years from the date of purchase by the original purchaser (the "warranty period") that the new Crown product is free of defects in materials and workmanship. We further warrant the new Crown product regardless of the reason for failure, except as excluded in this Warranty.

ITEMS EXCLUDED FROM THIS CROWN WARRANTY

This Crown Warranty is in effect only for failure of a new Crown product which occurred within the Warranty Period. It does not cover any product which has been damaged because of any intentional misuse, accident, negligence, or loss which is covered under any of your insurance contracts. This Crown Warranty also does not extend to the new Crown product if the serial number has been defaced, altered, or removed.

WHAT THE WARRANTOR WILL DO

We will remedy any defect, regardless of the reason for failure (except as excluded), by repair, replacement, or refund. We may not elect refund unless you agree, or unless we are unable to provide replacement, and repair is not practical or cannot be timely made. If a refund is elected, then you must make the defective or malfunctioning product available to us free and clear of all liens or other encumbrances. The refund will be equal to the actual purchase price, not including interest, insurance, closing costs, and other finance charges less a reasonable depreciation on the product from the date of original purchase. Warranty work can only be performed at our authorized service centers or at the factory. Warranty work for some products can only be performed at our factory. We will remedy the defect and ship the product from the service center or our factory within a reasonable time after receipt of the defective product at our authorized service center or our factory. All expenses in remedying the defect, including surface shipping costs in the United States, will be borne by us. (You must bear the expense of shipping the product between any foreign country and the port of entry in the United States including the return shipment, and all taxes, duties, and other customs fees for such foreign shipments.)

HOW TO OBTAIN WARRANTY SERVICE

You must notify us of your need for warranty service within the warranty period. All components must be shipped in a factory pack, which, if needed, may be obtained from us free of charge. Corrective action will be taken within a reasonable time of the date of receipt of the defective product by us or our authorized service center. If the repairs made by us or our authorized service center are not satisfactory, notify us or our authorized service center immediately.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

YOU ARE NOT ENTITLED TO RECOVER FROM US ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE NEW CROWN PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCTS RESULTING FROM SUCH A DEFECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

WARRANTY ALTERATIONS

No person has the authority to enlarge, amend, or modify this Crown Warranty. This Crown Warranty is not extended by the length of time which you are deprived of the use of the new Crown product. Repairs and replacement parts provided under the terms of this Crown Warranty shall carry only the unexpired portion of this Crown Warranty.

DESIGN CHANGES

We reserve the right to change the design of any product from time to time without notice and with no obligation to make corresponding changes in products previously manufactured.

LEGAL REMEDIES OF PURCHASER

THIS CROWN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. No action to enforce this Crown Warranty shall be commenced after expiration of the warranty period.

THIS STATEMENT OF WARRANTY SUPERSEDES ANY OTHERS CONTAINED IN THIS MANUAL FOR CROWN PRODUCTS.

12/01

Crown Microphone Warranty

REFERENCE

Crown's professional microphones are guaranteed against malfunction for a period of three years (one year for Sound Grabber) from date of original purchase. Should one of our microphones malfunction, it will be replaced or repaired at our expense, including all U.S. round-trip shipping. This warranty does not cover finish, appearance items, cable or cable connectors. This warranty does not cover normal wear and tear, malfunction due to abuse or operation at other than specified conditions. See your Crown dealer or representative for complete warranty details or contact Crown direct at 1-800-342-6939.

Crown Amplifier Warranty

WORLDWIDE EXCEPT USA & CANADA

SUMMARY OF WARRANTY

Crown International, 1718 West Mishawaka Road, Elkhart, Indiana 46517-4095 U.S.A. warrants to you, the ORIGINAL PURCHASER and ANY SUBSEQUENT OWNER of each NEW Crown1 product, for a period of three (3) years from the date of purchase by the original purchaser (the "warranty period") that the new Crown product is free of defects in materials and workmanship, and we further warrant the new Crown product regardless of the reason for failure, except as excluded in this Warranty.

1 Note: If your unit bears the name "Amcron," please substitute it for the name "Crown" in this warranty.

ITEMS EXCLUDED FROM THIS CROWN WARRANTY

This Crown Warranty is in effect only for failure of a new Crown product which occurred within the Warranty Period. It does not cover any product which has been damaged because of any intentional misuse, accident, negligence, or loss which is covered under any of your insurance contracts. This Crown Warranty also does not extend to the new Crown product if the serial number has been defaced, altered, or removed.

WHAT THE WARRANTOR WILL DO

We will remedy any defect, regardless of the reason for failure (except as excluded), by repair, replacement, or refund. We may not elect refund unless you agree, or unless we are unable to provide replacement, and repair is not practical or cannot be timely made. If a refund is elected, then you must make the defective or malfunctioning product available to us free and clear of all liens or other encumbrances. The refund will be equal to the actual purchase price, not including interest, insurance, closing costs, and other finance charges less a reasonable depreciation on the product from the date of original purchase. Warranty work can only be performed at our authorized service centers. We will remedy the defect and ship the product from the service center within a reasonable time after receipt of the defective product at our authorized service center.

HOW TO OBTAIN WARRANTY SERVICE

You must notify your local Crown importer of your need for warranty service within the warranty period. All components must be shipped in the original box. Corrective action will be taken within a reasonable time of the date of receipt of the defective product by our authorized service center. If the repairs made by our authorized service center are not satisfactory, notify our authorized service center immediately.

DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

YOU ARE NOT ENTITLED TO RECOVER FROM US ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE NEW CROWN PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCTS RESULTING FROM SUCH A DEFECT.

WARRANTY ALTERATIONS

No person has the authority to enlarge, amend, or modify this Crown Warranty. This Crown Warranty is not extended by the length of time which you are deprived of the use of the new Crown product. Repairs and replacement parts provided under the terms of this Crown Warranty shall carry only the unexpired portion of this Crown Warranty.

DESIGN CHANGES

We reserve the right to change the design of any product from time to time without notice and with no obligation to make corresponding changes in products previously manufactured.

LEGAL REMEDIES OF PURCHASER

No action to enforce this Crown Warranty shall be commenced after expiration of the warranty period.

THIS STATEMENT OF WARRANTY SUPERSEDES ANY OTHERS CONTAINED IN THIS MANUAL FOR CROWN PRODUCTS.

7/01

TRADEMARKS NOTICE: Crown, Crown Audio, Amcron, BCA, Com-Tech, IQ, Differoid, IOC, IQ System, Macro-Tech, Micro-Tech, ODEP, Phase Coherent Cardioid, P.I.P., PZM, PZMicrophone, Pressure Zone Microphone, PCC, SASS, and VZ are registered trademarks; Grounded Bridge, Power-Tech, PIP, PIP2, Studio Reference, TCP/IQ, IQwic, SmartAmp and IQ2 are trademarks of Crown International.

The Pressure Recording Process (PRP) (patented) is the basis for the PZMicrophones originally manufactured by Wahrenbrock Sound Associates, Ltd. Crown PZMicrophones are now manufactured under license from E. M. Long Associates and their agent, Synergetic Audio Concepts.

Neutrik, Speakon, Windows, CobraNet, ScreenArray, dbx, Phoenix and JBL are used for information only and are the property of their respective companies.

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Some models may be exported under the name Amcron®.





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